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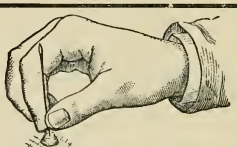
TRADE  MARK.

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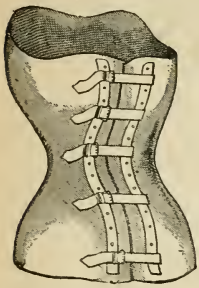

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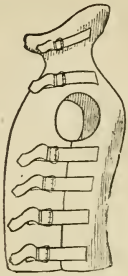

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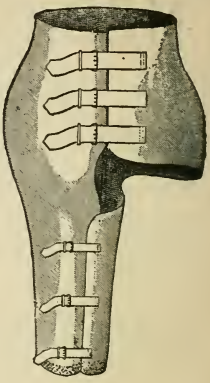

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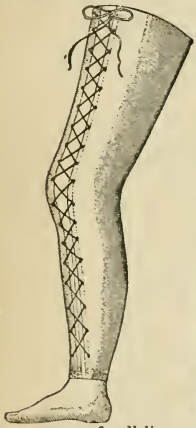

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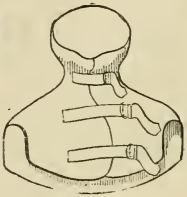

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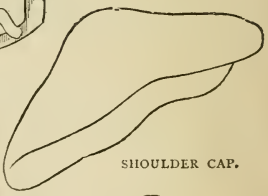

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PREFACE.

It is an incident, we believe, altogether unique in the history of an Annual Periodical, for the issue of one year to be accompanied in the press by a reprint of that of the preceding one. The DICTIONARY OF NEW TREATMENT, 1887, was an entirely new departure in medical literature, being at once a Retrospect and a complete work of reference on modern Therapeutics.

This work ran rapidly out of print, and the demand for copies being continuous, it became necessary either to repeat a large amount of the information there collected, in the present volume; or to issue a reprint, for the convenience of those Practitioners who were unable to obtain copies. We decided upon the latter course, so that our space might be left free for another departure which we trust will prove equally acceptable to our readers.

The Retrospect of the year's work in Medicine, Surgery, and Obstetrics, is incorporated in a series of articles designed to answer the question, "*What is the best method of Treatment in any given disease, in the view of those who have made such disease a subject of special study?*" This volume, therefore, contains much original matter, and partakes of the character of a Systematic Text-book; while that of last year had more of the nature of a Therapeutic Compendium. Each of these volumes, while complete in itself, is complemented by the other, and both, we think, will find their own sphere of usefulness.

We have considered the Therapeutics of the New Remedies, which have formed the subject of communication to the medical press during the past year, in a separate section; and the "Index of Diseases," which has been added to it, will at once show the new remedies which have been recently recommended in any particular form of disease.

In our endeavour to present the views of all with absolute impartiality, a large amount of material has been collected, the value of which can only be determined by precise and extensive clinical observation. The opportunity of making such observations is not reserved to the comparative few who are in the habit of contributing to the Medical Journals, but is possessed by every practitioner, and it is to the interest of Medical Science that such observations should be placed on record. We invite each one of our readers to send us short reports of their *failures* and *successes* with new remedies and new methods of treatment. We ask only for such notes as they would enter in their own Case Books, and if each reader contributes but one such observation the collective result will be an addition to our knowledge of incalculable value. Reports should be directed to the Secretary of the "Clinical Investigation Committee," care of the Publishers, who will also be glad to receive the names of those who will join the Committee, and assist in its work, a report of which will appear in our next issue.

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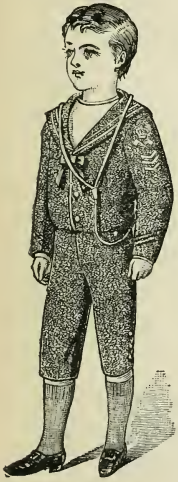

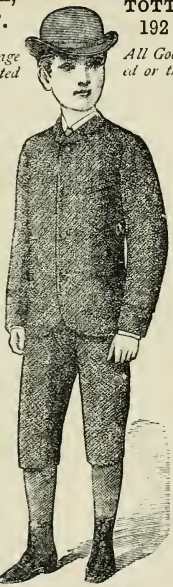

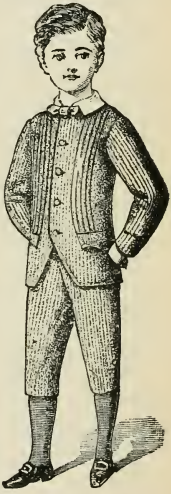

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OR

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PREPARED EXCLUSIVELY FROM OPIUM.

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BASCHURCH, SALOP,
Dec. 26th, 1887.

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"I have used your *Nepenthe* for several years. I believe it to be especially indicated in diseases of the urinary system, and find its action as an Anodyne superior to that of Hyoscyamus, Belladonna, or their preparations. Nephralgia and the cystitis caused by the presence of a stone in the bladder, are invariably relieved by it. I have administered *Nepenthe* frequently in cases of stone to allay painful symptoms until an operation could be performed; I prefer its internal exhibition to the hypodermic use of Morphia, as *Nepenthe* leaves no after effect on the digestive system. A long-standing case of ulceration of the bladder in a female, in which I have used every remedy I know of, both locally and internally, is always relieved by a 40 min. dose of *Nepenthe*. In strangury, acute and chronic cystitis, abnormal and malignant growths, also in that rare form of disease, tubercular disease of the bladder, I always find *Nepenthe* a safe and sure 'pain killer.'

I am, Gentlemen,
Your obedient servant,
(*Signed*), CECIL A. CORKE,
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THE MEDICAL ANNUAL.

A Dictionary of New Remedies,

AND

REVIEW OF THE THERAPEUTICS OF THE YEAR.

ABSYNTHIN.

This is the bitter element of the Artemisia Absynthium (L). It is used by Roux in doses of 1 to 3 grains to create appetite and prevent constipation in convalescents. It appears to have no advantage over other vegetable "bitters," and its many deleterious properties render it an undesirable medicine to employ. In large doses it produces intoxication.

It has been employed in some cases of **Fever** but without any decided results. It is almost insoluble in water, but is readily dissolved by alcohol or chloroform.

ACALYPHA.

A decoction of the leaves of Acalypha Indica is used as a *vermifuge* in Indian practice. The juice of the plant mixed with oil is employed as a liniment to relieve the pains of **Rheumatism** and **Syphilis**, and a decoction of the root is applied to relieve the pain of **Earache**.

A Tincture prepared from the fresh plant has been used in this country by Drs. Holcombe, Thomas, Clifton, and others, in cases of **Pulmonary Tuberculosis** when a short dry cough is followed by bloodstained expectoration. We have made use of the drug for this purpose in several cases with satisfactory results.

DOSE.—Tinct. ɱj to iv.

ACETANILIDE.

This drug is better known as Antifebrine. It belongs to the anilides and has the formula $C_6H_5N\,(C_2H_3O)H$.

In the chemical laboratory it has been employed for a considerable period for the production of other substitution products of aniline.

It is obtained by boiling aniline with glacial acetic acid for one or two days, and the acetanilide is isolated from the product by fractional

distillation (Williams). It was recommended by Messrs. Cahn and Hepp, as a febrifuge, who found it produce a fall of temperature within one hour, and that its maximum effects were not reached until three or four hours.

Dr. Weill gives an able report upon its action in the "Bull. Gén de Therapeutique," he says that it exerts a predominant influence on the nervous system, manifested by phenomena of collapse after a short period of excitement; generalized anæsthesia and analgesia; modifications of the cardiac and circulatory action ending in a notable increase of intra-vascular pressure and in peripheral vaso-constriction; and lowering of the central and peripheral temperature. In toxic doses, it profoundly modifies the normal elements of the blood, particularly the oxy-hæmoglobin, which it progressively reduces and finally changes into met-hæmoglobin; this results in a considerable diminution of the respiratory capacity and in disorders of the process that lead to death. The mechanism of its action seems to depend chiefly upon its direct influence on the bulbo-medullary cells.

Dr. A. Berézovsky of Kaza ("Russkaia Med.") has used it in a number of cases of **Fever**, and he finds that :—

1. Even small doses (4 grains) produce a marked fall of febrile temperature (0·9° C to 2° C) in an hour after the administration.

2. The duration of action is different in different types of fever; it is relatively shorter (1½ to 3 hours) in continued fevers, it is longer in remittent fever. The latter may be suppressed comparatively easily; the normal temperature may be kept up by giving four grain doses every two hours. However, the fever returns immediately after discontinuing the drug.

3. It reduces the frequency of the pulse from 8 to 22 beats a minute.

4. The blood-pressure markedly rises after a single dose.

5. The amount of urea decreases with a fall of temperature. The drug markedly improves appetite and does not give rise to any unpleasant symptoms, such as vomiting, etc.

Prof. Chacôt employs it with success in various nervous disorders. He found it relieve the pains of **Locomotor Ataxy** and the tremor of **Sclerosis**, and remove the symptoms entirely in some cases. He has also used it in **Epilepsy** with some success. Its power of relieving reflex excitability of the spinal cord should render it valuable in some cases of **Spinal Neuralgia** and **Hyperæsthesia**.

Dujardin-Beaumetz, who considers it inferior to antipyrin as a febrifuge, also extols it for nervous disorders; he employs it as a general anodyne, and for the pains of **Locomotor Ataxy** and for

Epilepsy. He considers it inferior to aconite in **Facial Neuralgia,** but in neuritis (when changes are taking place in the nerve) he considers it superior to all other remedies. He also speaks highly of it in **Muscular Rheumatism** and neuralgia of the articulations, in which he says it is superior to the Salicylates.

In **Acute Rheumatism,** as compared with antipyrin, Dr. Eisenhart finds it inferior, and it is also less curative than the salicylates ; but he admits that it is a valuable antipyretic in general, and especially in **Typhoid.** He expresses the conviction that the course of typhoid is rendered milder and its duration lessened by the administration of antifebrin.

Professor Fürbringer's trials of the drug are reported by Dr. Riese ("Central. für die Therapie," Jan. 1887.) It was administered in 30 cases : 10 of acute rheumatism ; 5 of typhoid ; 2 of pleuritis ; 4 of croupous pneumonia, and 9 of phthisis. At first the doses did not exceed 30 grains, but they were increased to 45, to 60, and in one case to 120 grains, without any toxic action of consequence. The date and degree of the decline in temperature were not uniform. As in the cases of acute rheumatism the temperature was only slightly elevated, the reduction effected by the remedy was inconsiderable. In typhoid, also, it influenced the fever but little, and in only one case was the diminution of fever maintained longer than the immediate action of the remedy. Very considerable variations were observed in the degree of antipyretic effect in different individuals, especially in the phthisical cases.

The slowing of the pulse corresponds to the decline of temperature. An increased tension of the arteries was usually witnessed. The respiration was also slowed, and lessened in volume, and occasionally some cyanosis of the face and extremities was observed. It never induced dizziness and headache, and, unlike antipyrin, did not cause nausea and vomiting ; but, in some instances, improved the appetite. Perspiration was a constant attendant on the decline of temperature, and, when large doses had been administered, it was excessive. In three instances alarming chills accompanied the rise in temperature, and were followed by weakness.

He concludes that it has no specific effect upon these maladies with the exception of **Acute Rheumatism.** He found that in these cases that after considerable doses the pain subsides in three days and disappears in five. It must be an exceptionally severe case if the pain has not disappeared by the fifth day. In four of the ten cases relapse occurred, but three of these required only one dose of forty-five grains.

In all of these cases the remedy had been discontinued on the cessation of the pain, and the cure was effected with salicylate of sodium, but the patients experienced ringing in the ears, headache, and vertigo which they had escaped when taking antifebrin.

Prof. Gerhardt states that he has obtained no decided results from its use in acute rheumatism.

DOSAGE.—Acetanilide has been given in very large doses amounting to 90 grains per day without producing evil results (Fürbringer). It has been claimed to be almost harmless by several observers. On the other hand two articles have recently appeared in the "Gyógyázat," in which it is pronounced an uncertain, and indeed a dangerous, antipyretic. Dr. Géza Dulácksha finds, after giving the drug a prolonged trial in the hospital, that small doses may bring down fever, but that in some cases even three-grain doses produce violent sweats, prostration, and hæmorrhage or cyanosis.

Dr. Biro gave acetanilide in eighteen cases of various kinds in doses varying from a grain and a half to 45 grains per diem, and was much struck with the uncertainty of its action, an effect being sometimes produced by a grain and a half, while at others 10 or 11 grains had no effect at all. Most of the patients complained of chilliness, while cyanosis and irregularity of pulse occurred in several cases. In one case, where 7½ grains had been taken, there was a severe rigor followed by cyanosis, sweating, and an irregular, thready pulse, the symptoms being so alarming that recourse was had to brandy and hypodermic injections of ether. In another case, in which acetanilide had been given for eleven days, similar symptoms presented themselves, together with clonic spasm of the lower extremities, reminding one of the symptoms in anilin poisoning. Altogether, Dr. Biro thinks that the evil effects of acetanilide are so great that it cannot be recommended for general adoption.

So far as the reports enable us to judge this drug has a point of dosage at which its maximum therapeutic effects are manifested, and that these decline when the dose is exceeded. Two to 4 grains may be given and the dose increased when necessary.

METHOD OF ADMINISTRATION.—Acetanilide may be given stirred up with milk, or in wafers, or dissolved in wine. In cases of phthisis a drachm of acetanilide may be dissolved in an ounce of tincture of lactuca, and this, given in doses of 20 drops at intervals, has a remarkable influence both upon the cough and fever in many cases.

Dr. Dujardin-Beaumetz considers that it has little effect upon the temperature when given during the apyretic stage, but during the

height of the febrile exacerbation even small doses make a considerable impression. ("Bull. Gen. de Therap.," March 30, 1887.)

ACETONE CHLOROFORM.

M. Engel has communicated to the Académie of Science the discovery by M. Willgerodt of a new body (combination?) to which he has given the above name. It is prepared, we are informed, by digesting, at a slightly elevated temperature, a mixture of anhydrous chloroform and acetone in equivalent proportions, and in the presence of a little hydrate of potassium. Combination takes place without difficulty, and the principal reaction seems at first sight to be one of simple addition in accordance with the following equation:

$CHCl_3$	+	C_3H_6O	=	$C_4H_7Cl_3O$
Chloroform.		Acetone.		New Compound.

There is not much clinical evidence respecting it yet, but we gather from a short abstract which appeared in the "Monthly Magazine of Pharmacy," that private trials have proved it to be non-poisonous, when taken internally, and that it lowers the temperature when above the normal limits, and also exerts a mild narcotic action.

An article in the "Western Druggist," June 1887, says that it differs only from the chloroform of commerce, in the fact that it is prepared from acetone instead of alcohol.

ACETPHENETIDIN.

It is with mingled feelings that we have to record the discovery of another *antipyretic*.

"It is obtained from carbolic acid, by the process of nitriting, separation of the ortho- and para-nitrophenols, acetylating the latter, reducing the *p*-nitrophenol to *p*-amidophenol, which is called phenetidin, and acetylating the phenetidin with glacial acetic acid." From this it will be seen that acetphenetidin is the acetyl derivative of the ethyl-ether of paramidophenol. We owe this to Messrs. O. Hinsberg and A. Kast whose experiments show that a dose of 3 to 8 grains will reduce the temperature of the human body 2°C, without unpleasant effects. "Pharm. Zeit. Berlin," March 26th, 1887.

Of the results of this compound compared with Acetanilide, we have at present received no information. It would appear that from the same series it is possible to produce a great number of substances differing in their chemical composition but nearly identical in their physiological action.

Its formula is said ("Pharm. Centl.," March 17, 1887) to be $NH_2C_6H_4OCH_2COH_2$. It occurs in small needle-shaped crystals of a faintly reddish tint, sparingly soluble in alcohol or strong acetic acid, but hardly

soluble in water. They are tasteless and melt at 130° C. The dose is stated to be 3 to 7 grains, but it has been given by Hinsberg and Kast in doses of 15 to 30 grains without injurious results.

ACONITE.

The recent experiments of Drs. Lauder Brunton and Theodore Cash were hardly needed to prove the value of this drug as an antipyretic, but they are important because the evidence they afford conclusively settles this question. The following is a summary of the results obtained (St. Bartholomew's Hospital Reports, Vol. XXII :)—

1. That in pigeons aconite acts as an anti-pyretic, both in large and small doses.

2. This antipyretic action is exerted whether their body temperature be normal, or be artificially raised, or artificially reduced, at the time of the injection of the drug. In all cases the injection causes the temperature to fall.

3. This fall is usually less in birds which have been artificially cooled than in birds whose temperature is normal, or has been raised artificially.

4. The action of the drug is apt to be modified by individual peculiarities in the birds which we are at present unable to explain.

5. The temperature returns more rapidly and completely towards the normal when the birds which have got aconite are kept in a warm place, although the primary fall induced by the administration of the drug may have been as great as, or greater than, that observed at medium temperatures.

6. A repetition of the dose after the effect of the first one has passed off causes a fall which is apparently uninfluenced by the first dose.

7. It is occasionally noticed that a *large* dose may cause a fall of temperature which is *smaller* but more prolonged than that caused by a smaller dose.

8. In guinea-pigs cooling appears to retard the fall of temperature caused by the drug, and also to retard the return to the normal.

9. The temperature of animals exposed to a heated atmosphere is but little affected by aconite ; in fact, *large* doses may diminish the resistance of the animal to the effect of external heat, and cause the temperature of an animal to rise *higher* than that of one to which no aconite has been given.

10. If the animal be exposed to cold when the drug is administered, the fall of temperature is both more rapid and more extensive than in the normal animal.

The important lesson taught by these experiments is the futility of

using large doses of this remedy. Some practitioners seem to have a difficulty in understanding that an increase of dose is not always followed by an increase of therapeutical action. We remember some years ago witnessing some trials of this drug as an antipyretic in the Edinburgh Infirmary, and the conclusion reached was that while it had some power to diminish temperature, it was from its depressing action on the heart, a remedy too dangerous for ordinary employment. As a matter of fact the dose employed was ten times as great as that required to produce its maximum therapeutic effect, so that while its remedial powers were diminished its toxic effects were induced.

From personal experience we should fix the dose of greatest efficacy as ranging from $\frac{1}{2}$ to 2♏ of the B.P. tincture, and for the first three hours of its use we should recommend it to be given at intervals of one half to one hour, and subsequently every two hours.

In speaking of aconite as an antipyretic it must be remembered that it has its limitations. It is only exceptionally that it is of value in the fever of malaria or septicæmia, or in typhoid or typhus. It has no power of antidoting the poison upon which such fevers depend, but in **Measles** and **Scarlatina** and in **Simple Gastric Fever** it may be used with advantage. Its chief indication is in the fevers which depend upon **Acute Inflammation** of any portion of the body, and here it checks the fever by causing contraction of the dilated blood-vessels over the inflamed area, and thus checking the inflammatory process.

This remedy should have a far more extended use in surgical practice than it has had hitherto.

As a remedy for **Neuralgia** the liniment of aconite has a time-honoured reputation, its effects being considered due to the temporary anæsthesia produced at the point of application. In a recent article in the "London Medical Record," aconite is considered to be one of the most powerful remedies known for certain forms of neuralgia. "The therapeutic indications are those of so-called 'essential' neuralgia *sine materia a frigore*, or of rheumatic nature, especially facial neuralgia, and neuralgia of the trigemini, although it may assume the characteristics of inveterate *tic douloureux*. As to the mode of administering, clinical observation shows that preference should be given to the digestive organs. Granules containing one quarter milligramme of crystallised aconitine (for crystallised nitrate of aconitine the doses being the same) may be given. An interval of four hours should be allowed between each granule, the total quantity administered during twenty-four hours not exceeding one milligramme of the medicine. There

are forms of obstinate facial neuralgia, however, which resist the action of aconitine alone, such as the intermittent forms, and these forms likewise resist the action of quinine alone. In such cases complete results are obtained by associating the two drugs. This is done in pills as follows:—Hydrobromate of quinine, 10 centigrammes; crystallised aconitine, $\frac{1}{2}$ milligramme. One pill containing the above quantity of quinine and aconitine is administered every four or five hours." (Ibid.)

Dr. E. Waitzfelder, at a meeting of the New York Medical Society, January 24, 1887, gave a very favourable account of the influence of aconitine in nervous diseases; out of three cases of chronic **Sciatica** treated, two derived decided benefit. In **Pachymeningitis**, whether syphilitic or not, he had observed benefit on several occasions. He also recommended its employment for subduing hyperæsthesia in cases of spinal irritation. We doubt the advantage of using the active principles of this drug in preference to the ordinary tincture, which is cheaper, easier prescribed, and less liable to errors in dispensing than the alkaloid.

The influence of aconite upon neuralgia probably depends upon its general power of controlling local inflammation and congestion, and this gives a general indication for the class of cases likely to be benefitted. Another point in the administration of aconite is that if its therapeutic effects are not exhibited within twenty-four hours they are not likely to be produced by the further administration of the remedy. We may therefore take it as a general rule in prescribing aconite that it should be given *early*, given *often*, but never given *long*.

ACORN.

The fruit of the oak roasted and mixed with powdered cocoa has been lately claimed as an excellent remedy for the diarrhœa and vomiting of children. Dr. F. W. Elsner, in the "Australasian Medical Gazette," June, 1886, claims to have cured twenty cases of continued and exhausting **Diarrhœa** and **Vomiting** by giving teaspoonful doses of the "acorn cocoa" (boiled with water) three times a day. He states that improvement was always manifested within two days, and this in some cases where ordinary remedies had failed. Liebreich is said to have suggested this combination.

ADONIDIN.

The action of this remedy on the heart and blood vessels has recently been re-investigated by M. Henri Huchard. He found improvement in the tension of the heart and blood vessels after the first

day of its employment, but considers that it cannot be regarded as a successful rival to digitalis.

The value of both this remedy and others of its class, appears to be to take the place of digitalis during the intervals of suspension rendered necessary by the cumulative action of this drug. By giving such remedies during alternate weeks, with digitalis, it is possible to maintain the action of the heart at a normal standard during an indefinite time without fear of those toxic symptoms of digitalis which may be regarded as the real cause of death in a large number of the victims of heart-disease.

ÆSCULUS HIPPOCASTANUM (The Horse-Chestnut).

The action of preparations made from the fruit have been tested upon a number of persons in health by Dr. Buchmann and others, and the result has been to show that they have a direct specific relation to certain organs of the body. The most marked symptoms were observed upon the *rectum* and *anus*, and *lumbo-sacral region* and also upon the *throat*.

Dr Richard Hughes speaks of it as being of the highest value in the treatment of **Hæmorrhoids,** "especially in those cases where there is much pain and little bleeding." Dr. Hale and others agree in this being a key-note to its use, and say that it is most useful in the "absence of constipation," differing from collinsonia, which is indicated when the piles are the direct result of constipation. Dr. Guernsey mentions another not uncommon symptom as an indication for the employment of æsculus. He says there is a feeling of pain in the sacro-iliac symphysis; it is not severe, more a sensation of painful weakness, and is worse after exercise, but relieved by rest. When attempting to walk or attending to the usual occupations the back "gives out and the patient is obliged to rest."

Our readers will remember patients who have complained of these symptoms, due as they probably are to the pelvic congestion; they should find a useful remedy in æsculus.

Dr. Mayhoffer, of Nice, has recorded a case of **Pharyngo-laryngitis,** associated with hæmorrhoids, in which this drug gave rapid curative results, and Drs. Dyce Brown and Clifton have reported similar cases in which it proved very efficacious. It seems likely that this drug will prove of great value in a condition very common in this country where congested liver and pharyngeal catarrh are such common ailments.

Dose.—Trituration of the Nut, 2 to 3 grains; Liquid Ext. 2 to 3 minims; Tinct. 2 to 10 minims.

AGARICUS.

The question of the value of this drug as a palliative for the night sweats of **Phthisis** has again been opened by the experiments of Dr. Vitali Miller, of St. Petersburgh. He employed agaricin (a principle extracted from agaricus albus, a poisonous fungus), in doses of one Russian grain (= ·966 grain English). He experimented in seventeen cases of phthisis, and there was a diminution in the sweating in twelve of these; in five cases it produced no effect. No increase of effect was produced by increasing the dose, but in some cases diarrhœa followed the use of the remedy. The results on the whole were more favourable than those recently recorded by Dr. Murrell in the "Practitioner."

ALETRIS FARINOSA (Star Grass).

The name star-grass is given to several plants, among them the Helonias dioica which has somewhat similar properties; there are also a number of other names by which aletris is known, and these are all applied to the helonias as well. Preparations are made from the root for medicinal purposes.

It has an intensely bitter taste; in fact it is hardly exceeded in this respect by aloes or quassia. It has been used as a bitter tonic in small doses; large doses produce nausea, giddiness, and narcotic effects. Professor Lee regards it as an "alterative tonic," very similar to hydrastin. Its tonic effects are exhibited in a special way upon the uterine organs. It does good service in **Amenorrhœa** and **Dysmenorrhœa**, and congested condition of the uterus, and when there is a tendency to **Abortion.** It appears to strengthen the uterine ligaments, and so serve to remedy **Prolapsus.**

Dr. Silas Jones has recommended it for the nausea, vomiting and giddiness of pregnancy. Dr. Hale says that it is of the greatest value in the following class of cases: **Debility,** general or local, arising from protracted illness, loss of fluids and defective nutrition; **Myalgia** arising from mental or physical depression; **Passive Hæmorrhage** or **Congestion of the Uterus.** Also, he strongly recommends it for the nervous exhaustion of brain workers, or those who have been under the influence of distressing emotions. "Here phosphorus or phosphoric acid, or the hypophosphites do not always meet the demands of the system. Neither will aletris *alone;* but if both are given in alternation, the system rapidly regains its normal integrity.

Dose.—Tinct. ♏5 to 10.

ALLYL—Tribromide of.

This was first prepared by Wurtz in 1857 ("Ann. de Chimie," li. 91)

by the reaction of iodide of allyl on one and a half times its weight of bromine, and is a colourless liquid, soluble in ether, boiling at 217° C., and having a specific gravity of 2·436. According to Dr. De Fleury ("Archives de Pharm.." August, page 352), this compound has been employed with good effects in **Hysteria, Asthma, Angina Pectoris,** and **Infantile Convulsions.** It was administered in capsules, each containing 5 drops, two to four capsules being given daily, or subcutaneously in doses of 2 to 4 drops dissolved in one or two cubic centimetres of ether. ("Pharm. Journ. and Trans.," August 28, 1886.)

ALSTONIA CONSTRICTA (Queensland Fever Bark).

This drug has been used for some time by Dr. Bixly, who states, ("American Med. Jour.,") that its action resembles the combined effects of nux vomica and quinine. It is at once an antiperiodic and cerebro-spinal stimulant. He advises its use in cases of **Nervous Depression,** and also in **Typhoid** and **Puerperal Fevers.** He also employs it in **Recent Colds** and **Rheumatism.** It has been employed in Melbourne by Dr. Bancroft as a substitute for quinine.

DOSE.—Tinct. 1 to 2 fluid drachms.

ALUMINA (Nitrate of).

Dr. H. Z. Gill, ("St. Louis Med. and Surg. Jour.,") states that he has used this remedy for the cure of **Pruritus Vulva** with more satisfaction and success than any other. He made a lotion by dissolving 4 to 6 grains in an ounce of soft water, and directed it to be used as a wash or injection, once or twice a-day.

AMBROSIA ARTEMISIÆFOLIA.

A correspondent in the "Medical World," (Philadelphia) says:—"I know of no prophylactic for **Whooping Cough**; but will give you the name of a medicine that has cured every case with me during the past three years; and I have had over one hundred cases. It is the tincture of ambrosia artem., one half-teaspoonful in a glass of water: give a teaspoonful every two hours." (Nux vomica antidotes ambrosia.)

AMMONIA HYDROCHLORATE.

Dr. W. J. Greene, of Peckham, writing to the "Medical Press and Circular," says:—"I wish to call the attention of my professional brethren to hydrochlorate of ammonia in this connection. I am not aware that this drug has been generally used in the treatment of **Neuralgic Affections,** but in my own practice I have by repeated trials been led to look upon it as a specific, especially in those forms of the disease affecting the dental and facial nerves. I give it in from ten to twenty-grain doses every two hours until the symptoms are relieved;

but if after the patient has taken it four times, the pain continues, it will be useless to persevere. In toothache proper it is often of great benefit; however, if there be inflammation around the fangs of the tooth, hydrochlorate of ammonia will do no good. It may be administered in any convenient vehicle. I generally use either camphor or chloroform water, the latter is perhaps the better, as it somewhat disguises the excessive saltness of the hydrochlorate, the greatest drawback to its administration."

AMYKOS.

This is an antiseptic fluid much employed in Sweden and Finland. It is manufactured at Upsala, and is said to be chiefly composed of boracic acid and thymol.

Dr. J. J. Trusewikz ("Russ. Med." No. 46, 1886), says that diluted with two or three volumes of water, amykos makes a good injection or irrigation in acute and subacute **Coryza** and **Syphilitic Rhinitis**. He also found solutions of amykos very useful as collyria in acute **Conjunctivitis** and as irrigations in **Catarrhal Otitis**. The best results, however, were obtained in acute and chronic **Gonorrhœa**; the burning pain on micturition was immediately relieved, and after two or three days the discharge became mucous instead of purulent. It is well to begin with weak injections (one part of amykos to four parts of water). After two or three days the strength of the solution may be gradually increased. In mild cases the disease was cured in about a week. When the mucous discharge does not cease about that time, some astringent, such as sulphate of zinc or acetate of lead, should be added to the amykos solution.

ANILINE.

It is known that the most dilute solution of aniline has the most fatal effect upon Koch's tubercle bacillus, but it has little or no poisonous effect upon the human body; this gave Professor Kremianski the idea of treating **Phthisis** by keeping the lungs bathed in a solution of aniline. A committee was appointed by the Moscow Medical Congress to watch the experiments conducted by the Professor. Only two experiments were made, and in the first the aniline was combined with nux vomica, mint water and acetanilide, and in the second the cavities were washed out with corrosive sublimate, while acetanilide was used coincidently with the aniline treatment. The results although said to be favourable are perfectly valueless. It is extraordinary how medical observers make a practice of mixing three or four different drugs, or adopting several methods of treatment coinci-

dently, and then claim the whole success for one favoured method. It is this which vitiates the results of clinical experience, and leads to disappointment.

ANTIMONII ET POTASSII TARTRAS.

Dr. Prvegler found himself without vaccine lymph on board an emigrant vessel, on which a fatal case of **Small-pox** had occurred. There was a panic among the passengers, but the doctor was equal to the occasion. He remembered that the vesicles produced by tartar emetic inoculations were almost identical with those of small pox; and having first inoculated himself with tartar emetic, and afterwards the passengers, he says, ("Journal of the Amer. Association," Feb. 1886,) "the pustules could not be distinguished from real vaccination pustules. It must be remembered that during our service in the Prussian army we had an extended opportunity of seeing small-pox (especially among the French), so that I am well aware of what I write. I inoculated all the passengers and had the satisfaction that every vaccination took. Our journey, on account of contrary winds, was a tedious and long one, lasting sixty days, though time passed swiftly enough for me. I am perfectly convinced that the combined care and cleanliness I exacted from the passengers, and the re-vaccination (or *morale* of it?) succeeded in staying the ravages of the disease, which might have been very fatal in such a crowded ship as ours."

ANTIPYRIN.

As an antipyretic remedy this drug has lost ground during the past year. The severe and frequently fatal results which have followed its employment in sufficient doses to produce its physiological effects, together with the fact that these effects are found to be without specific influence upon the diseases in which it has been employed, have led many physicians to wholly discontinue its use—in favour of Acetanilide (which see).

But it is probable that this drug will prove of service as an *anodyne* in some affections of the nervous system. Prof. Lépine in the "Lyon Médical," Aug. 15, 1886, states that in a non-febrile patient a dose of a drachm or rather more produces a special kind of cerebral excitement, which has no exact parallel. The intellectual faculties are quickened: the patient feels especially wide awake and disinclined to sleep. If he does go to sleep, he is probably restless and constantly dreaming. The state, on the whole, is not particularly pleasant to a healthy man, but it is not accompanied or followed by any tinnitus or

vertigo. It may be called a kind of antipyrin intoxication, resembling in some points the effects of a small dose of morphine. In some cases of nervous disease associated with much pain it calms the pain as well as morphine, or even better, and leaves less uncomfortable sequelæ. In patients with the lightning pains of **Locomotor Ataxy,** who have been too long accustomed to morphine, and who dread the after-effects of sodium salicylate, Professor Lépine gives about 150 grs. of antipyrin a day in two doses, and observes that great relief results from it. There is some accompanying insomnia, which he finds can be satisfactorily treated with chloral, and some temporary increase of the inco-ordination, but that ceases at once when the drug is left off; and the relief from the change of treatment much more than counterbalances these disadvantages. In many hysterical cases also, both with and without chloral, he has found it of service, and is anxious that a wider trial should be given to it in these classes of cases.

Dr. Germain Sée also classes the drug among the anodynes. He says that its value will be best appreciated when it is given for rheumatic or gouty affections accompanied by **Painful Arthritis,** or, still better, in nervous conditions characterised by pain. In fifteen cases suffering from subacute rheumatism or hydrarthrosis, which had resisted the actual cautery and salicylate of soda, the pain and swelling of the joints disappeared in a few days and did not return, when antipyrin in small doses was continued for a week. The same results were obtained in acute attacks of **Gout,** superadded or not to the chronic affection, with uratic deposits or tophi, and localised in the wrists or joints of the lower extremity, when the drug was given in doses of from 4 to 6 grammes in the twenty-four hours. The pain ceased and the swelling disappeared in from two to four days without any undesirable effect being produced on the heart or kidneys. M. Sée quotes fourteen cases of **Cranial Neuralgia** which rapidly yielded under treatment; six cases of **Migraine** of old standing, five of which recovered in two hours, one patient only being unrelieved as she was unable to take the drug. A second series of eighteen cases comprised neuralgias or neurites and muscular pains, five of which were cases of **Sciatica,** three herpetic neuritis, several cases of old standing **Lumbago,** etc. A third series of cases bore on the lightning-pains of **Locomotor Ataxy.** The treatment was successful with only one or two exceptions, in doses of from 15 grains given in solution every hour or every four hours. If any inconvenience resulted from its use, the dose was halved and given more frequently. He also found it very useful

in the treatment of certain forms of **Angina Pectoris.** A peculiar eruption, resembling urticaria, or scarlatina, is apt to make its appearance, but it soon goes away when the dose is lessened. The drug can be detected in the urine by means of the perchloride of iron for two or three days after the cessation of the treatment. Its influence in relieving pain would appear to be dependent on the action of the drug on the spinal cord as well as on the peripheral motor nerves. M. Sée calls attention particularly to the fact that the heart is not affected, and the blood-pressure remains unaltered.

In **Migraine** it has been used by Dr. Spremon "Mediz. Obozrenie," 1023, 1886. He says that given at the height of a fit, the drug only partially relieves pain, but does not shorten the duration of symptoms (especially when the patient remains on his legs all the while). But when administered during the period of prodomal phenomena, antipyrin almost invariably cuts short the paroxysm within an hour, and allows the patient to immediately resume his occupations. The dose required is 1 scruple. In delicate persons, or in those liable to giddiness, it is better to divide the dose in two parts and to give the second portion (if necessary) about half an hour after the first.

This bears out the statement of M. Lvoff of Kazan, who we believe was the first to use this drug in Migraine, and additional testimony is furnished by Dr. Ungar, "Central. für. Klin. Med.," No. 45, 1886.

As this drug belongs to the same group as the salicylates which in small doses have rapid curative powers in many cases of Migraine, it is very probable that it may become a valuable agent in the treatment of these affections. It will be remembered that these drugs have the power of producing symptoms resembling Migraine and that the maximum *therapeutic* effects must be looked for in both cases in moderate doses. We would therefore suggest that small doses should be given at frequent intervals until the required effect is produced; we shall thus be able to arrive at some definite conclusions as to the ordinary range of dose required.

In **Skin Disease** this drug has not been employed at present, but we think that this will eventually prove one of its most valuable applications. The large number of cases which have been reported of "antipyrin rash" tends to show that this drug has a specific relation to the cutaneous circulation. We presume that this rash is the result of paralysis of the vaso-motor nerves over the affected areas, and following Claude Bernard's dictum that any substance which in large doses paralyses a nerve, stimulates it if given in small ones,

it seems probable on theoretical grounds that antipyrin in grain doses would prove valuable in certain erythematous conditions of the skin, in the acute stage of psoriasis, and perhaps in simple cutaneous Erysipelas.

ANTITHERMIN.

"Antithermin" is the name that has been proposed for a new synthetically prepared compound which has just been added to the army of *antipyretics*, "Nouv. Remèdes," March, p. 102. The systematic name of the compound is "phenylhydrazinlevulinic acid," from which it is evident that it has a near chemical relationship with antipyrin. It will be remembered that one of the intermediate products in the formation of this widely-used antipyretic is phenylhydrazin, the composition of which is represented by the formula—

$$N_2 \left\{ \begin{matrix} C_6H_5 \\ H \\ H \\ H \end{matrix} \right.$$

This compound has the property of combining with other compounds to a remarkable extent, as, for instance, with aldehydes, ketones, sugars, and ketone acids, antipyrin being, in fact, a methylated derivative from a compound of phenylhydrazin with aceto-acetic acid. The new antipyretic is a compound of phenylhydrazin with acetopropionic acid, a homologue of aceto-acetic acid, to which the name levulinic acid also has been applied, because it can be prepared by oxidizing levulose. Phenylhydrazinlevulinic acid, or antithermin, is said to be obtained by dissolving phenylhydrazin in dilute acetic acid, and adding to it a solution of levulinic acid, which gives rise to a yellow precipitate that yields well-formed crystals upon recrystallization from alcohol. ("Pharmaceutical Journal and Transactions," April 2, 1887.)

APOCYNUM CANNABINUM.

The apocynum cannabinum is a herbaceous and perennial plant, belonging to the family of the apocynaceæ, which flourishes in the United States. The root, which has been used for some time past in America, contains tannin, resin and two substances—apocynine and apocynum—having similar properties to digitalis. Dr. Rusch's attention was attracted to this plant by its valuable properties as a hydragogue in arresting serous effusion of the pleura and peritoneum. It is both tonic and diuretic, and is valuable in general Anasarca. A decoction is made of 4 grammes of the bark to 250 grammes of water, and a dose of 30 grammes is given every six hours.

There are a large number of observers who have borne testimony to its power in relieving **Anasarca** and **Dropsy**, and it has been called the "vegetable trochar" in consequence, but it is difficult to gather precise indications for its employment. Dr. J. A Lewis ("Therapeutic Gazette"), records of cases of **Pleurisy with effusion** treated with this drug, in all of which its effects appear remarkable. The Fluid Extract was employed in doses of 1 to 10 minims.

APOMORPHIA.

Dr. Stocquart, ("Jour. de sci. méd. de Lille," Jan. 14, 1887,) has repeated Bergmeister and Ludwig's experiments with apomorphine hydrochloride, and has found that from 6 to 12 drops of a 1 per cent. solution produce an **Anæsthesia** of the conjunctiva closely resembling that effected with cucaine and lasting from five to ten minutes. It is accompanied with dilatation of the pupil, slight nausea, and then dryness of the conjunctiva.

APON.

Under this name Dr. Poulet, ("Bull. de Thérapeutique") has described a tincture prepared by himself as follows :

℞ Tr. Capsici, 200·0 | Essentiæ Thymi
Ammon. Liquidi, 100·0 | Hydrati Chloralis, āā 10·0
| Alcoholis (60 per cent.), 1000·0

M. Sig. Apon.

The pepper is digested with the alcohol and the ammonia for a month, then the essence and the hydrate of chloral are added to the expressed liquid, and finally the whole is preserved in a hermetically-closed bottle.

Apon applied locally has been found of great value in **Hysterical Pains, General Muscular Cold, Angina, Influenza, Muscular Rheumatism, Dysentery, Enteritis, Hæmorrhoids, Sea-sickness and Suppressed Sweats.** It is applied on a flannel rag, either pure or mixed, with a fatty oil. Internally 10 to 20 drops may be given in a little water ; shortly after that half a glass of water or tea is drunk.

ARBUTIN.

A glucoside prepared from bearberry leaves (*Uva Ursi*). Menche has used it as a diuretic in **Mitral Disease**, and it is also said to be of value in **Vesical Catarrh** and **Urethritis.** It splits up into sugar and quinine in the body, and it is considered that it is to the irritative effects of the latter body that its stimulating properties depend. It is given in doses of 45 to 60 grains of the powder in twenty-four hours.

ARNICA.

The Editor of the "Medical Press," June 8, 1887, in an article upon "popular remedies," says, "None of these drugs, however, rejoice in the popularity which arnica has acquired for itself in the treatment of **Bruises** and **Ecchymoses.** Notwithstanding incontrovertible evidence of the effects attributed to it being really due to the alcoholic solvent, it is still the sovereign remedy for a threatening black eye or aggressive kick. Indeed, we find it mentioned by so great an authority as Dr. Lauder Brunton "internally and externally" for ecchymoses, in the last edition of his "Treatise on Therapeutics." If the result were only to credit arnica with properties which it has been shown not to possess, no great harm would have been done, but there is evidence to show that although the plant is devoid of any resolvent effect on damaged tissues, it possesses irritant qualities, which may, under certain circumstances give rise to violent inflammation. It is more particularly when the tincture is applied to abraded or mucous surfaces, that those irritant effects are manifested, and many instances are on record of serious damage as a consequence of its unguarded application."

We believe the incontrovertible evidence showing the uselessness of arnica is the single experiment performed by Dr. Garrod many years ago. He made two artificial bruises by means of cupping glasses, and treated one with spirit, and the other with arnica, and both bruises got well.

The Swiss mountaineers attach very great importance to its curative power in bruises, but although it is a popular remedy in the sense that it is more largely used by the public than the profession, we have evidence that it has been employed by some members of the medical profession for at least 300 years. It was introduced by Dr. Fehr under the name of "panacea lapsorum" at least 250 years before Dr. Garrod tried to prove that the tincture owed its efficacy to the spirits of wine employed in its manufacture. The direction given in Dr. Garrod's "Text Book" as well as others, is that it may be used as a lotion either alone or with water; the result has been a number of fatal cases of erysipelas. The tincture of arnica is a very powerful drug, and when used as a lotion the dose should never exceed 10 to 15 minims to the ounce of water, *and under no circumstances* should it be applied when the skin has been broken.

ARSENIC.

Is *Arsenic of value in Skin Diseases?*

This question has been seriously discussed both at the New York

Dermatological Society, and in the "Journal of Cutaneous and Venereal Diseases" for November and December, 1886. It is one of the misfortunes of therapeutic investigations that directly a drug is found to be of value in any class of diseases, it is immediately seized upon as a universal specific; it is used in season and out of season, and on the principle that the greater the amount of it which can be introduced into the system of the patient without killing him, the greater will be the therapeutic result. It is not surprising that a point should be reached at last, when men witnessing the disastrous effects of the remedy, and the number of their failures begin to question the wisdom of the line of treatment they have been pursuing; but it is astonishing that a body of men educated in scientific methods should invariably turn upon the drug, and place their failure to its account, rather than learn the lesson that it is because they have abused the drug, that the drug comes to be abused. Piffard states that he considers arsenic of great value, and points out that the more extended the eruption the more useful the drug. He rarely gives a medium dose, preferring in sub-acute and chronic cases to give a *large* dose, while in acute cases he gives very *minute* doses. We are glad to find that Dr. Piffard agrees with the conclusion that we advanced in the article "**Psoriasis**," "Medical Annual," 1887, p. 336. We wrote as follows:—"Of the specific relation of arsenic to this disease there can be no doubt. In recent cases, during the stage of active congestion, the disease can be very much increased by giving too large doses of the remedy, but in chronic cases the same dose will be productive of the best results. The reason of this, we take to be, that during the early stage there is a condition of physiological excitement of the skin, while in the after stages the condition more nearly approaches that of paresis; the minute dose of arsenic appears to subdue this excitement, while the larger dose has an undoubted stimulating effect. We agree with the rule laid down by Hunt, and quoted by Dr. Sydney Ringer, that the largest dose of arsenic ever required is 5 minims (of the liquor), but we do not agree with the general statement that arsenic is contraindicated in the inflammatory stages of eruptions. Just as a mild stimulating liniment appears to soothe the irritation of a chilblain, so will arsenic, if used in sufficiently minute doses control the hyperæmia and irritation of the skin. Of the use of arsenic in the chronic forms of the disease it is unnecessary to speak, but we contend that the primary aggravation which Dr. Ringer states to be the regular course of the treatment, and to be regarded as a good result of the remedy, is never necessary, and only

indicates that the dose used has been too large, *i.e.*, the degree of stimulation has been too great."

The eruptions in which Dr. Piffard has found arsenic valuable are **Eczema** (acute and sub-acute), **Psoriasis** (chronic), **Pemphigus** and **Syphilis** (some forms of), and **Acne.**

Dr. Taylor, ("Journ. of Cut. and Ven. Disease," Dec. 1886), gives more precise indications for its use. It is in **Acne**, simplex and indurata that he employs it; and as regards **Eczema** he finds it of most value in the erythematous and squamous gouty and neurotic forms. In **Syphilis** it is in scaling syphilides, in malignant precocious syphilis, and the ulceration forms, that he finds most benefit. He also claims it as an useful remedy in **Lichen Planus**, (Dermatitis Herpetiformi) and **Urticaria** (chronic).

Drs. Morrow and Allen, (*Ibid*), states that they have lost faith in the efficacy of this drug in **Psoriaris**, but the latter has seen it do good in cases of **Lichen Ruber.**

A tabulated statement of the replies received from forty physicians shows that arsenic was used quite generally for skin diseases by eighteen of them, while eight did not use it to any great extent. Twenty-one of them had seen more or less severe symptoms of poisoning from its use. Thirty-three of them made use of Fowler's solution exclusively. Dr. E. L. Keys in the August number of the same journal speaks of the general and diffused nature of the eruption as a good clinical indication.

In a case of non-syphilitic **Rupia** covering the whole body, but specially affecting the lower lip, which was enormously swollen and constantly discharging, and which the constant flow of saliva over the crust offered a mechanical obstacle to healing, we were surprised at the rapid recovery following the use of arsenious acid (gr. $\frac{1}{200}$) repeated every third hour.

The *value of Arsenic in Anæmia* formed the subject of discussion at a recent meeting of the Philadelphia Medical Society. Dr. J. C. Wilson mentioned that the best results had been obtained in his practice in the following cases:—1, **Early Phthisis**; 2, **Heart Cases**; and 3, **Subacute Gastritis.** In pulmonary disease, there is a double indication for arsenic; it is a gastric tonic, and also a direct stimulant to the respiratory centre. There is also a third reason, that is, it favours the rapid breaking down and elimination of inflammatory products. It is of service in cardiac cases, on account of its favourable influence upon general nutrition; hence also, its use in chronic gastritis.

Dr. Henson stated that in cases of anæmia associated with **Diseased Bone**, he found arsenic much more useful than iron. Dr. Laurence Turnbull gave some account of the deleterious effects produced by the large doses of arsenic commonly employed. He found it specially destructive to diseased bones and teeth; it also produced serious symptoms both in the eyes and stomach, and also in the kidneys.

Dr. P. A. Moroon, ("La France Médicale," 11th January,) has observed the following variety of cutaneous eruptions from the use of arsenic; erythema, papules, urticaria, vesicles, pustules, ulceration, skin bronzing. In each case the discontinuance of the drug caused the disappearance of the rash.

Arsenic for Malignant Tumours and Glandular Swellings. Dr. F. Köbel gives an interesting communication in the "Mittheilungen aus der Chir. Klinik zu Tübingen," Bd. ii., Heft. i., on the treatment of non-operable malignant tumours by arsenic. Fifty-nine cases are reported, of which number two-thirds were males and one-third females. The treatment consisted in the administration of Fowler's solution along with some bitter tincture or with iron. Five drops of Fowler's solution were given as the initial dose, and every two or three days this was increased by 1 drop, until 40 to 45 drops were taken in the day, when the dose was gradually diminished. If symptoms of arsenical poisoning manifested themselves the medicine was omitted for some days. Parenchymatous injections were also employed of Fowler's solution and distilled water in equal parts; about 2 drops at first gradually increased to 8 or 10. It is pointed out that, in order to determine whether this treatment is useless or successful, it must be steadily persevered in for at least two months. Out of the fifty-nine cases seventeen were cured (!). In the successful cases the treatment was continued for periods of from one to six months. Of some of the cases that recovered it is said that operation was out of the question, and death must otherwise have taken place within a measurable time.

Mr. Frederick Treves in a paper read before the Clinical Society of London, March 25th, 1887, called attention to the clinical aspects of a certain form of non-leuchæmic **Gland-Enlargement** that could be cured by arsenic. The patients are usually past middle age; they present no peculiar constitutional defect; there is no suggestion of gout, rheumatism, or scrofula. There is no leuchæmia. The neck is usually involved. The gland-tumors appear on both sides without disturbances in the periphery. The masses vary in size from a hazel-nut to a duck's egg. They are soft, elastic, homogeneous, movable

painless and free from tenderness. They show a disposition to spread without limit. The temperature is normal, and suppuration does not take place. Mr. Treves gave instances of the cure of such cases by the use of arsenic. The drug is given in the form of liq. arsenicalis, commencing with a dose of 5 minims, and increasing to 20 minims three times a day. The treatment has to be kept up for some months, one to six. The glands waste, some few suppurate, and in such instances the resulting sinuses heal without further treatment. In cases where the whole neck has been filled with great glandular masses the tumors have wholly disappeared after a treatment of from four to six months. Some of these cases, at least, would probably be covered by the term Hodgkin's disease. Mr. Treves concluded by an allusion to Dr. Köbel's paper on the treatment of malignant growth by arsenic administered by the mouth, and also hypodermically.

Antidote to Arsenic. A writer in the "Indian Statesman" claims that the bark of the common goolar tree (Indian fig) is a certain antidote to both arsenic and aconite, if given in doses of from 10 to 12 drachms, finely powdered and mixed with water. This dose may be repeated three or four times at short intervals, if necessary.

ATHEROSPERMA MOSCHATA.

This tree grows in mountain ravines on the coast of Victoria and Tasmania. An oil obtained from the bark has been used as a *cardiac sedative* in excited conditions of the circulatory system. It is also used as a diaphoretic and diuretic in **Asthma** and **Chronic Bronchitis.**

DOSE.—*Oil*, 1 to 2 drops every six hours: *Tincture*, 1 fluid drachm.

BENZOATE OF SODA.

In a communication to the Clinical Society of Paris, Dr. Ruault ("La France Médicale,") recommends the topical application and internal use of benzoate of sodium for catarrhal and inflammatory diseases of the mucous surfaces. In **Diphtheria** it is said to be particularly useful; the membrane melting down and disappearing under its influence. Two cases of diphtheria successfully treated by it, in children, aged four and six respectively, are recorded: the dose being 4 to 6 grammes daily; 12 grammes daily is the author's maximum dose for adults, though Nitznech has given 25 grammes. If its use is prolonged beyond 12 or 15 grammes gastric troubles are liable to be produced. 3 to 8 grammes daily is the usual dose of English and American physicians.

BENZOIN.

Dr. A. Voskresensky regards the following a specific for **Ulcers** affecting emaciated cachectic and elderly people :

℞ Benzoin Resin	ʒii	Ung. Porci	ʒiv
Ceræ Flavæ	ʒiv		

Fiat. Ung. This is spread in a thick layer on a piece of lint placed over the ulcer.

BENZYL-TROPINE—

Has been discovered to be a powerful *local anæsthetic* by Prof. Filehne, of Breslau, "Berl. Klin. Woch." No. 7, 1887. This is produced by the union of benzoic acid with tropine. The result of the elaborate and careful experiments shows that all the Benzyl derivatives have a decided local anæsthetic action. The most powerful is benzyl-methyl-triaceton-alkamine ; next benzyl-quinine ; the weakest being benzyl-morphine. Excepting benzyl-tropine, none of these substances are suitable for use, as even a neutral solution when applied to the eye causes a painful burning sensation. Benzyl-tropine has not this effect, but at the same time acts too much like atropine, and, besides, is still too expensive to be used as a substitute for cucaine.

BERBERIS AQUIFOLIUM (Oregon grape root).

This is a popular remedy in some parts of America, as a general *tonic* and *antiperiodic*. It is also employed in syphilitic and strumous disorders.

Dose Liq. Ext., 15 to 30 minims ; Tinct., ½ to 2 fluid drachms.

BETOL.

Sahli, who discovered Salol, has now called attention to this substance, which is a salicylic ether of napthol. *Salol* splits up after administration into salicylic acid and phenol. *Betol* splits up into salicylic acid and napthol. It contains however ten per cent. less salicylic acid than salol, but is free from odour and taste. Sahli recommends it in cases of **Articular Rheumatism and Neuralgia**, but it sometimes fails owing to the decomposition of the drug not taking place before elimination. It is suggested, therefore, that it shall be given in oil, as it is very soluble in fluid fats, and this it is supposed would facilitate the decomposition. We can suggest a simpler way, which is to give salicylic acid in its pure form when we desire to produce its physiological effects, and napthol when it is the effect of napthol that is desired. It is possible that betol can cure disease which neither of its component parts can effect, but until observers can furnish some proof of this, it seems better to content ourselves with the drugs in their simple state.

BISMUTH.

Is Bismuth poisonous?

A case recorded by Dalché appears to give evidence in the affirmative. A woman of thirty suffered a very extensive burn of the third degree from the scapular angles to the nates on the 19th September. On the 26th the wound was dressed with subnitrate of bismuth, and from October 3rd it was found necessary to renew the dressings every second day. On October 11th the patient complained of pain in the neck and dysphagia, and white false membranes began to show themselves on the palate, uvula and tonsils. These spots spread, the lower lip became involved, and a dark brown line appeared on the gums. There was no albuminuria. On the 13th the soft palate was sphacelous, and as the false membrane separated it revealed dark spots in the tissues. Diarrhœa now set in, followed on the 27th by vomiting, and both of these symptoms persisted until November 1st, when albumen made its appearance in the urine. The bismuth dressings had meanwhile been stopped on the 27th October, whereupon no fresh patches were found in the mouth, although the dark spots continued visible for another month. The bismuth preparation proved to be perfectly pure, with scarcely a trace of the oxychloride. Bismuth was detected in the fæces and urine. ("Centralblatt f. med. Wiss.," 1887, No. 5.)

Bismuth Sub-Iodide.—This is intended to replace iodoform. Iodine fused with bismuth forms bismuth iodide. Boiling the latter with water leads to the precipitation of the subiodide as a fine powder. It, like iodol, is said to be inodorous, and yet to be equally as effective as iodoform as an antiseptic.

Bismuth, Salicylate of, appears to have done good service in some cases of **Chronic and Intestinal Catarrh.**

Dr. Solger ("Deutsche Medicinal. Zeitung," No. 22, 1886), states, that he first gave it to a German physician, who for ten years had suffered from frequently returning pains in the region of the sigmoid flexure. Laxatives, medicinal waters, diet, electricity, nervines, in brief, everything that therapeutists could suggest, were either useless or even deteriorated the condition of the patient. Using for fourteen days salicylate of bismuth, in doses of 12 grains three times daily, the patient got rid of his pains and recuperated fully his broken-down health. A return of the pains some time after yielded also to a fourteen days' medication with salicylate of bismuth.

Later, he has given the drug to numerous patients, both in private and in hospital practice, and has obtained surprising results with it.

He has, however, reduced the average dose from 12 grains to 8 to 10 grains, without obtaining any less satisfactory results. The following formula represents, according to the writer, the most effective and convenient mode of employing the drug :

℞ Bismuth. salicyl., | Sacchari lactis, āā ʒvi.
M. Fiat pulv., divide in p. æq. No. 40.
Sig.—One powder every eight hours.

The drug occasions no inconvenience, either when taken on an empty stomach at six o'clock in the morning, or after dinner at two o'clock, provided the dry powder is washed down with a little water. Given in wafers, the drug is apt to produce some gastric irritation.

Solger gave the drug principally in **Chronic Diarrhœa** and intestinal catarrh, especially after other remedies had failed. An aged lady, who, suffering from a chronic intestinal catarrh and involuntary discharges from the bowels, had been reduced to a stage of profound emaciation, and had for years been confined to the bed, regained in three months her health by the use of salicylate of bismuth. In another case, a demented woman, troubled with chronic diarrhœa and incontinence of urine, took the drug for several months, and recovered not only from her grave physical ailments but also gained a certain low degree of intelligence. In phthisical subjects the drug proved likewise very valuable in arresting the exhausting diarrhœas and inducing a state of comparative well-being.

BLISTERS.

Dr. Wyss, of Geneva, in "Der Fortschritt," No. 1, Jan. 5, 1887, gives a warning against the use of blisters. He says, "Blisters, although devoid of real remedial properties, are still daily prescribed, perhaps more with the view of sustaining the hopes and confidence of the patient, and of gaining time for the natural process of recovery, than in expectation of actual benefit. The long experience of an extensive practice leads me to consider blisters an unnecessary cruelty to the patients, which ought entirely to be discarded. I myself, like my colleagues, have employed blisters in the treatment of pneumonia, pleurisy, sciatica, and other diseases, but I failed ever observing the slightest benefit from their use. On the contrary, I found them more or less injurious. Blisters disturb the sleep of the patient, so much in want of restorative rest ; they impair in many irritable patients the urinary organs, and they frequently bring on obstinate cutaneous eruptions. Moreover, they cause actual harm by almost invariably increasing the fever in already feverish patients, and thus seriously affect the general condition."

Dr. Wyss records a case illustrating this and concludes "All my experiences tend to convince me that blisters are a therapeutical mistake, and an unnecessary cruelty to the patients, and therefore ought entirely to be abandoned."

BLOOD (Defibrinated).

We have from year to year spoken of the advantage obtained by the use of defibrinated dessicated bullocks' blood as an enema in cases where rectal alimentation is necessary. Dr. Valera, "Siglo Medico," Dr. Mariani, "Revista," and Dr. Escorileada, "El Genio Medico Quir.," now record cases of **Anæmia** and **Chlorosis** treated by this agent, but the former give no particulars of the mode of administration while the last named observer used it in the form of a spray by inhalation, as recommended by Jubini, the defibrinated blood being in the proportion of 80 to 20 per cent. of ·75 per cent. salt solution. Other treatment had failed to improve the nutrition, but visible improvement was noted after four inhalations. Cold affusion with sea-water was also employed.

BOLA de FUEGO (Fire Ball).

This is a species of mallow common in Mexico. Dr. Egea reports ("Gaceta Med. de Mexico") most remarkable results in a case of spotted **Leprosy**, in which "the surface of the body from head to foot was simply one great ulcer, the foul odour of which no amount of carbolic lotion or ointment could destroy." He also mentions a similar case treated by him, in which the ulcers healed within a month. They used a decoction made by boiling a handful of the leaves in a pint of water; one pint, and afterwards two pints of this were given during the day. ("New Commercial Plants and Drugs," No. 10.)

BOLDO-GLUCINE.

This is an aromatic substance of the nature of a glucoside, obtained by M. Chapoteaut from the leaves of the *Pneums boldus*, or *Boldo fragrans*, a plant belonging to the Monimiaceæ, which has from time immemorial been employed by the natives of Bolivia, Chili, and Peru in **Hepatic Diseases.**

M. Juranville has recently made some observations in respect to the hypnotic properties of this drug. Dogs were sent to sleep by intravenous injections of boldo-glucine, in quantities of from 2 to 7 grammes. Observations were taken and curves constructed, showing that during the sleep produced the cardiac beats increased in rapidity, while the amplitude of the pulsations diminished; the arterial pressure was not affected. M. Juranville gathered from his observations that

anæmia of the brain was produced. His therapeutic researches were conducted on insane patients, the doses given being from 22·5 grains to 2 drachms, the substance being enclosed in gelatin-capsules or introduced by means of enemata. It was not found easy to administer it in the form of draughts on account of their powerful odour. It gave rise to no disagreeable symptoms, and indeed, appeared to stimulate the appetite and the digestive functions. The *hypnotic* effect was very definite, ten patients on whom it was tried being all sent to sleep, and in some cases their hallucinations being removed ; the effect was not, however, permanent, the sleeplessness and hallucinations returning on the cessation of the treatment. M. Juranville concludes that though boldo is not a perfect hypnotic, it is likely to prove valuable in cases of neurotic or **Maniacal Insomnia** when other drugs have been tried without effect.

BRYONIA ALBA.

This drug was formerly employed as a hydragogue cathartic in doses of 2 to 10 fl. drachms. (Tincture). Its use was abandoned on account of its irritant properties, it having the power of causing specific inflammation of serous membranes, and in a less powerful degree inflaming the muscle and mucous membrane. It has recently ("Brit. Med. Jour." Oct. 8th) been added to the "Formulary of unofficinal remedies," by the committee appointed by the British Pharmaceutical Conference, and the dose fixed at 1 to 10 minims of the tincture. From this we gather that its use will in future be confined to its action as a specific stimulant in inflammatory affections of the pleura-peritoneum and synovial membranes. The clinical evidence of its value in these cases is steadily increasing, and all observers agree that it produces its best effects when given in conjunction with aconite.

In **Acute Rheumatism** the two remedies may be given in alternation every two hours, and this treatment will not only act as an antipyretic, but it will also control the pain and bring the joints to the normal condition. Compared with antipyrin, it controls the disease which antipyrin fails to effect, but it does not bring down the temperature so rapidly. Compared with the salicin compounds, its effects are not so prompt and decisive either in respect to the pain or the temperature, but the recovery of the patient is more rapid, and there is not the same tendency for the disease to recur ; it is of course free from all the dangers and inconveniences which accompany the use of salicin in doses sufficient to accomplish its decisive results.

In **Pleurisy** bryonia is indicated during the inflammatory stage ; in cases where it is employed, the stage of effusion is rarely reached. It

has been used in the **Pleuro-Pneumonia** of cattle with very great advantage, and is said to be one of the best remedies for this affection in the human subject. We can speak of this remedy with considerable personal experience, and can highly recommend it to our readers.

DOSE.—Tinct. 1 to 10 minims.

CACODYLIC ACID.

The action of this substance is still a matter of doubt in consequence of the admixture of arsenious acid with most of the preparations obtainable. Generally speaking, its effects may be said to resemble those of arsenious acid, but they are more transitory. J. Marshall and W. D. Green, "Amer. Chem. Jour.," vol. viii. 128—138.

CAFFEINE.

Some experiments upon rabbits and pigeons have been made by W. v. Schroeder, of Strasburg, ("Arch. f. exp. Path. und Pharm.," vol. xxii.,) 1886, to determine the mode in which this drug acts as a *diuretic*. The result leads him to conclude that its chief, if not its entire effect is local, and he compares its action with that of pilocarpine on the salivary glands, except that it does not act through the medium of secretory nerves but directly on the kidney substance. Whether the action is on the glomeruli or on the convoluted tubuli is not clear, but he inclines to the view that caffeine is a direct stimulator of the renal epithelium. The complaint of the uncertainty of the action of caffeine as a *diuretic* is, he believes, due to its effect on the central nervous system, coinciding with the result of his first experiments, and referable to different susceptibility of the nervous system in different individuals. He therefore recommends the use with caffeine of some substance which may depress the nervous system, and he finds that paraldehyde serves the purpose very well. From his investigations v. Schroeder concludes that caffeine acts in two ways ; first, by exciting the central nervous system comparably to strychnine, which interferes with the secretion of urine ; and, secondly, by acting directly on the kidney substance, this effect being characterised by the occurrence of a free flow of urine.

CANNABIS INDICA.

Cannabine.

M. Duquesnel claims to have isolated this principle of cannabis indica, by a method which renders it of uniform composition. He found that the most potent extracts were those manufactured by means of petroleum. These he prepared by macerating the tops of the plant in rectified spirit ; the spirit was then driven off and the product

set aside, when it separated into a lower layer of watery extract, soluble in water but inert; secondly, an upper green resinous layer with a marked odour of the drug. This contains the active constituents. It is dissolved in alcohol at 70°C. and allowed to cool. A clear liquid and an insoluble substance are obtained, the latter yielding further soluble products on repeating the treatment. The clear liquid is decanted and crystals of acetate of lead added. A copious precipitate results; the filtrate filtered and evaporated to an extract, yields a brownish soft resinoid mass. This is dissolved in essence of petroleum and again evaporated, and the resulting product is cannabine.

As a result of experiments performed with this drug, Dr. Roux concludes: (1) that the active part of Indian hemp is contained in resin and not in the essential oil; (2) that the petroleum extract possesses convulsive properties which may terminate in coma and death; (3) the alcoholic extract has a narcotic effect on some, but the sleep is never deep—its effect is, moreover uncertain; (4) the other preparations (ethereal extract, tannate, etc.) appeared absolutely inert.

All the active extracts of cannabis indica rapidly induce loss of appetite and emaciation, with apathy, even after a few doses.

Cannabinon

Is a purified resin, prepared from cannabis indica. It is brown in colour, and of the consistence of treacle. Dr Pusinelli, of Dresden, has tried the effect of this drug upon himself, and gives a graphic account of the symptoms produced in the "Deutsch Med. Woch.," No. 46, 1886. He took one of Bombelon's tablets after dinner. In a short time he had a sudden attack of singing in the ears, and had great difficulty in understanding the newspaper he was reading, always forgetting what he had just read. As yet there was no lassitude, but rather a feeling as of electric currents passing through his body. Then all his nerves seemed to tremble; he had a buzzing in his head, with a dull boring pain in the temples. His appearance was so alarming that a doctor was called. In the meantime he grew very excited, being compelled to lift one leg after the other in time, and then to strike one hand after the other on his thigh. All the while he could observe his own condition. He feared he was becoming mad, and went to close the window to prevent himself jumping out, as he felt himself driven to do. To satisfy his craving for fresh air he breathed deeply and quickly. When attempting to speak he always forgot what he had just said, and his voice sounded to him as if it belonged to another person. If he sat still his whole body

assumed a peculiar condition of stiffness. His sight was also greatly disturbed. Objects seemed to expand and contract; parallel lines converged. On trying to walk he felt as if the ground were slanting to either side. His feet looked to him to be in the far distance, and his limbs hardly seemed to belong to him. Mustard papers applied to his calves gave him no pain, though he afterwards found they had raised blisters. For an hour he felt as if his body was double; he felt quite distinctly two uvulas. His head felt like a large iron cap, the ice-bag on it seemed to press like a heavy seal immediately on the brain, without however causing pain. Then he grew faint; his feet and hands became icy cold, and his pulse at 50 in the minute, was weak and threadlike. His consciousness now became clearer at times, and the mustard, after being on for an hour, caused him pain. Suddenly he grew unnaturally hilarious, laughing senselessly at everything he said. When all this had lasted for four hours he grew extremely fatigued, his head resting like a lump of lead on his hand. He slept uneasily for two-and-a-half hours, and awoke quite clear, with only a trace of double vision for a few minutes. He was neither sick nor had headache, and was neither fatigued nor excited. He only noticed polyuria for the following six hours. Such was the effect of this "harmless hypnotic" on one who had tried all other hypnotics he knew of without any ill effects. Merck's cannabinum tannicum had not excited him in the least.

CANTHARIDES.

According to Dr. Lukomsky the Russian peasantry adopt the following method of treating domestic animals when bitten by a rabid dog or wolf: They give a dry cantharide, divided in 3 or 4 parts in a bread pill, and simultaneously a decoction of drok (*Genista tinctoria*) is given. The treatment lasts two or three days, and as a rule, proves quite successful. About forty years ago the author was called to five peasants who had been just before bitten by a rabid wolf. Having washed out their wounds, he applied unguentum cantharidum and administered internally ½ a grain of powdered cantharides with 1 grain of calomel twice daily, and a decoction of drok and root of wild elder tree (*Dikaia büzina*), 2 glassfuls a day. Suppuration was kept up for three weeks; the internal treatment continued two weeks; cantharides, however, were discontinued each time as strangury and scalding in the urethra appeared, to be again resumed after the disappearance of those symptoms. All four patients treated after the plan remained well, while the fifth, who had refused to take cantharides, died from hydrophobia. The same method

of treatment was applied with equal success by Dr. Lukomsky in three other cases of bite by rabid dogs. ("Russkaia Meditz.," No. 42, 1886.)

Several other observers have since adopted the treatment with success.

CARBONIC ACID GAS.

The inhalation of this gas as a remedy for **Catarrhal Bronchitis, Emphysema, Asthma** and **Phthisis** has been revived by Dr. Dupont. ("Bull. Gén. de Thérap.," Jan. 15, 1887.)

He uses a mixture of 1 part of carbonic acid gas to 3 times its volume of pure oxygen, and administers as much as 150 litres in twenty-four hours.

He claims for this method all the advantages which Bergeon asserts to follow the inflation of the rectum with the same gas. Since Bergeon has acknowledged that the beneficial effects of his method are due solely to the carbonic acid, and not to the sulphuretted hydrogen, there exists no good reason why the gas should not be administered by the lungs; as the rectal method is inconvenient, without any advantages to offset. He considers that its action is *antiseptic*, *anæsthetic*, and indirectly an aliment by preventing waste and lowering the temperature. He also says that it stimulates the digestive functions and increases peristalsis.

CARDUUS MARIÆ (Mary Thistle).

This is one of those remedies which have fallen in and out of use from the earliest period. Mr. George Foy, ("Med. Press and Circular," May 28, 1887,) calls attention to its virtues. We learn from this article that Tripier is employing it, combined with aloes, in constipation, and it is said to excite the liver and prevent the formation of piles, which so frequently accompanies the use of aloes alone. Mr. Gray, in 1818, claimed the root was diuretic, deobstruent, lithotriptic, and the seeds were diaphoretic. It is officinal in America, where it is considered to have tonic, diaphoretic and emetic properties; 4 to 5 grains are said to produce vomiting, but 8 grain doses are recommended for intermittent fevers.

CARICA PAPAYA.

The report of a committee of the Royal Society of New South Wales, appointed to inquire into the properties of this drug has recently appeared in the "Australasian Medical Gazette," Feb. 1887. Their experiments were made with the liquid extract containing not more than 4 per cent. of alcohol, a tincture of the ordinary pharmacopœia strength, and a solid extract of a gelatinous consistency. These experiments appear to show that the mammary secretion

could be stimulated, in cases where the flow had commenced to fail, either by the internal administration of the drug or by topical applications. It is even claimed that in the virgin breast it can call forth a limpid secretion, but that this effect is merely transitory.

The committee appear to claim without reserve the greatest efficiency for carica papaya as a *galactagogue.* They have also noticed that when administered to pregnant patients it acts as an *abortifacient.*

The committee have likewise made a few experiments as regards its digestive power on meat, and while admitting that they were not considered satisfactory, the opinion was expressed that such power as was generally attributed to the drug in this particular was exerted on the sarcolemma, the muscle-cell or contents of the sarcous particles becoming released and exposed to the thorough action of the gastric juices. It was found to have no solvent action on albumen.

CARMINATIVES.

How do Carminatives relieve flatulency?

Drs. Brunton and Carl have conducted some experiments with a view to answering this question. ("St. Barth. Hosp. Rep." vol. xxii.)

The gases used in the experiments were atmospheric air, carbonic acid gas, hydrogen, marsh gas, coal gas, and sulphuretted hydrogen. With the exception of one experiment the oil of cloves was the only carminative used. In each experiment they first tested the gases alone, and then again after the administration of the carminative. They found that little or no absorption took place when atmospheric air, hydrogen, coal gas, or marsh gas was used, and the addition of the carminative did not seem to increase the absorption. It was only in the case of carbonic acid that the carminative seemed to aid in absorption, and this was due probably more to the effect on the movements of the intestine than to direct absorption of gas. The oil of cloves caused a marked increase in the secretion of the intestine—a fact which perhaps explains the advisability of combining carminatives with purgatives. In regard to sulphuretted hydrogen it was found that its absorption proceeded so rapidly as to produce even fatal poisoning, but carminatives did not exert much influence in increasing the absorption.

CAROBA.

The leaves of the Caroba (*Jacaranda procera*) are made into an infusion by the natives of Brazil, which they use for the cure of **Syphilis** and **Skin Disease.** It is also used as a tonic.

Dose—Infus. ʒi ; Ext. Liq. 10 to 30 minims.

CASCARA SAGRADA.

Dr. M. H. Fussel, of Philadelphia, tabulates fifty cases in the "Therapeutic Gazette," in which this drug was used as a laxative. The results convinced him of its very great value, and he employs it almost to the exclusion of other laxatives.

He uses the fluid extract, of which he gives gtt. xx. three times a day. In no instance was it found necessary to *increase* the dose, and in twenty-nine cases he reduced it without diminishing its therapeutic effects. Out of the fifty cases given, it appears to have answered the purpose for which it was given in forty-three cases, and to have completely failed in seven.

CASSIA ALATA.

Conillebault, ("Thèse de Paris," 1886), has found that neither tincture of iodine, sulphur, bichloride of mercury, nor oil of cade gives such prompt results in the treatment of **Ringworm** of the body as rubbing the parts with the leaves of cassia alata moistened with water. Where the fresh leaves are not attainable, an extract prepared with acetic acid is advised.

CASTOR OIL.

M. de Gassicourt has recently called attention to the facility with which the casein of milk emulsifies castor oil. For this purpose the casein must be quite pure, and a little bicarbonate of sodium and powdered sugar should be added. He suggested the following formula as having the advantage of masking the taste of the oil without interfering with its effects:

℞ Casein (with Soda and Sugar) q.s.		Laurel Water	5 parts
Castor Oil	15 parts	Distilled Water	100 ,,

CAULOPHYLLUM THALICTROIDES (Squaw-root, Pappoose-root, Blue-genseng, Blue-berry).

This is a perennial herb, growing freely in most parts of the United States, where it has been esteemed a valuable remedy from the earliest times. It was recommended by the eclectic physicians, Drs. Smith, Mateson, Henry, King, Jones & Scudder, and Coe, as an anti-spasmodic, emmenagogue, parturient, anthelmintic, diaphoretic and anti-spasmodic. It was subsequently submitted to careful experiment by Dr. Hale, of Chicago. Dr. Burt proved the resinoid caulophyllin upon himself, and the record of the symptoms is given in "Hale's New Remedies," pp. 171-3. The action of the drug appears to be specially directed to the small joints of the hands and feet, producing symptoms resembling **Acute Rheumatism**. It has been employed

with considerable success in this form of rheumatism, especially in the case of women, when it is secondary to uterine disorder. It has a marked effect upon the uterine organs, and has been used to check uterine contractions in cases of threatened **Abortion** and in cramp of the uterine muscles; it also proves a valuable remedy in **Dysmenorrhœa**, especially when the pain is chiefly felt in the lower part of the back. In a case of deficient labour pains, when ergot could not be given on account of spasmodic contraction of the os uteri, the drug proved successful. Dr. Richard Hughes says that it "seems specially suitable to affections of the motor nerves, sympathetic with uterine irritation." Dr. Helmuth states that he has used this drug with success "for the removal of those discolorations of the skin of the face common in women with menstrual irregularities or uterine disease."

DOSE.—Liq. Ext. ♏ 2 to 10; Tinct. ♏ 5 to 60; Caulophyllin (resin) 1 to 4 grs.

CHIAN TURPENTINE.

Has it any power over cancerous growths?

Since Dr. Clay reported his successful cases of **Cancer** treated by this drug some years ago very little testimony has been added in evidence of its value. Dr. Clay still adheres to his belief in its value, and reports three cases, not as isolated examples, but as a type of a number of successes obtained by similar treatment in cases alike as to their character and their situation. The first was a case of **Epithelioma** of the tongue diagnosed by two of the "highest authorities in London," and by Mr. Bury, of Barnet. The latter says, "On examination, I found, in the situation above mentioned, an ulceration of about the size of a sixpence, with a hardened and everted edge on the tongue side of it. There was a row of raised shot-like epithelial growths (not in a state of ulceration) proceeding from the ulcer on the lateral border of the tongue, and running forwards towards the tip for about three-quarters of an inch. The tissues around the ulceration and growths were thickened and hard from cancerous infiltration. There was an enlarged submaxillary gland about the size of a pullet's egg. The movements of the tongue were limited and painful. The patient was well nourished, but depressed and anxious. I gave an unfavourable prognosis, but thought it was a case in which chian turpentine ought to be perseveringly tried, as that seemed to be the only alternative left to him. He was ordered the following: 8 ounces of chian turpentine mixture (Southall's) and 2 drachms of resorcin, 2 teaspoonfuls three times daily; and to have the ulcer and growths slightly painted on alternate days, respectively

with chromic acid solution (10 grains to the ounce) and solution of perchloride of mercury (1 grain to the ounce)."

The patient was seen on March 30th; improvement appears to have been first manifested in about three weeks, and three weeks later Mr. Bury reported that the glandular swelling was entirely gone, and the ulcer quite healed. Dr. Clay examined the patient on July 10th, and "found the enlarged gland had disappeared; the tongue could be moved freely and without pain; on the right side it looked and felt quite normal, as though it had never been effected. On the left side of the neck, however, I discovered an enlarged gland, and on the lateral border of the tongue on the same side I found an epithelial growth of the size of a hazel-nut in a sloughing condition. The remedies were ordered to be continued as before. I saw the patient about a month afterwards. The newly discovered growth had all but disappeared, and a month later I found the parts free from disease. The medicine was directed to be taken in diminished doses, and the local applications to be discontinued. I saw him in December of the same year, when he was quite well and proposed spending some weeks on the continent."

CASE 2: EPITHELIOMA OF THE UPPER LIP.— Mrs W., aged 52 years. General health good; has had four children, but no miscarriages; never had syphilis; menopause about eight years previously. She consulted me on October 20th, 1883, at the Queen's Hospital, ostensibly for a vaginal discharge, but really for a growth occupying nearly the whole of the upper lip and involving the lower portion of the left ala nasi. She had been under the care of Mr. W. Freer, who had advised its removal. It presented a fungating raised appearance, and was irregular in outline. The surrounding tissue was hard to the touch, and the cancerous infiltration extended some distance around the nodule. A small portion was excised by scissors, and examined by the resident physician and resident obstetric surgeon under the microscope, in the fresh state, and well-marked 'epithelial nests' reported. On account of hæmorrhages, the growth was painted over once with perchloride of iron solution, and afterwards dressed with vaseline. The simple chian turpentine mixture was ordered to be taken three times daily in two teaspoonful doses. The patient presented herself regularly every fortnight at the hospital, and at the end of ten weeks the mass had shrunk considerably, and had a black appearance; the infiltration had disappeared, and she was now free from pain. In the twelfth week the mass felt loose, but it was not interfered with. Thirteen weeks from the commencement of the treatment, on getting

up in the morning, the patient found that the mass had separated during the night. The lip was free from hardness and movable. There was a white cicatrix about the size of a shilling, and a slight notch in the margin of the lip. I saw her on August 16th, 1886, she was quite well, and there had been no recurrence.

CASE 3: EPITHELIOMA OF THE OS AND CERVIX UTERI.—Mrs. W., aged 54 years. Very feeble and emaciated, and cachexia well marked. Could not walk a hundred yards even with assistance. Has had very profuse watery and sanguineous uterine discharges for several weeks. Mr. L. Tait who had seen her previously, had, she stated, pronounced the case to be uterine-cancer, and incurable, and that she could not live a fortnight. On examining the uterus, a mass of epitheliomatous cancer, about the size of a hen's egg, occupied the upper part of the vagina, but believed to be limited to the uterus; it bled freely from the examination. I ordered the chian turpentine mixture with resorcin, and directed her to use vinegar and water injections. At the end of seven weeks the hæmorrhage and leuchorrhœal discharges had nearly ceased, and the patient could walk more than a mile twice weekly to see me. The growth had almost disappeared. At the end of five months she had increased 15 lb. in weight. About the seventh month she had an attack of facial paralysis affecting the right side, which probably arose from cold. She recovered almost completely. Now (a year and a half from the commencement of the treatment) she can attend to her household duties as well as she could before her illness. The growth has cicatrised completely. There is a small nodule, which appears to be healthy, and represents the os and the cervix of the uterus.

Dr. G. W. F. Bury, F.R.C.S., of New Barnet, on Nov. 6, reported another case to the *Lancet*: "Mrs. G., aged 49, sent for me in Oct. 1883. She had been suffering from occasional and severe hæmorrhage from the vagina for some five or six months, accompanied with little pain and slight colourless discharge in the intervals of the hemorrhages. On examination per vaginam, the os and cervix uteri were replaced by an extensive ulcerating surface of a decidedly malignant character. The hæmorrhage was soon arrested by cotton wool plugs saturated with glycerine of tannin, but it frequently recurred, and between its arrest and reappearance a purulent discharge, with the characteristic cancerous odour, was observed. In the hope that some alleviation of the symptoms might result, I gave her the chian turpentine pills according to Dr. Clay's formula, and she took them for some weeks. However there was no improvement in any way, and it was decided

that Dr. Playfair should see her in consultation. He did so, and confirmed my diagnosis of cancer, considering it to be of the medullary form. His prognosis was that "she could not last many weeks." He advised the carrying out of Dr. Clay's treatment in its entirety—viz., the chian turpentine mixture, and the insufflation of charcoal and tannin per vaginam. The treatment was rigidly carried out, mainly by my coadjutor, Mr. W. A. Fox. Instead of losing ground, notwithstanding the persistence of the discharge and occasional hæmorrhage, her strength was maintained during the next few months, when all her symptoms gradually abated. The treatment, however, was fully continued for nearly a year, at the end of which time she was practically cured, and about twenty months from the time Dr. Playfair first saw her, he again examined her, and said that she was perfectly cured, to his extreme astonishment. She remains without a vestige of the disease at the present moment.

I am tempted, with your permission, to add a note respecting a case of long standing cancer of the breast in a woman aged 48, who had been an out-patient at a metropolitan hospital, and was discharged as unfit for operation. The left breast was destroyed down to the ribs, and its place taken by a superficial cancerous ulcer surrounded by nodules of cancer. She took Dr. Clay's remedies for some months, and then discontinued them on account of the expense. I have seen her to-day (Oct. 16th) and find that the nodules have much diminished in size, that all her pain had disappeared, and that she has gained and is gaining flesh.

May I suggest that one of the reasons of the failure of this treatment as carried out at the Middlesex Hospital, and by medical men generally, is an insufficiently long trial of the remedies—in fact, too great haste in discarding a treatment which does not give immediate results.

CHIMAPHILA UMBELLATA (Pipsissewa and Ground Holly).

Dr. Sommerville in 1814, and Dr. Mitchell in 1803, wrote papers upon the value of this remedy, but it appears to have been chiefly employed by American practitioners, and comes to us through them as a new remedy. It has been employed with success in Scrofula. Professor Wood has formed a high opinion of it in this disease; the late Dr. Joseph Parish considered that it ranked next to cod-liver oil, iodine and iron in the treatment of this affection. Professor Lee also fully endorses these opinions.

To obtain its full effects it should be long continued, and should be interrupted when any considerable degree of fever intervenes. Dr.

Justice, of Carolina, says that he has known it to effect perfect cures in obstinate cases of scrofula, without the aid of other means. But the value of this drug is most recognised in the treatment of urinary affections.

In Germany it is regarded as an excellent remedy in **Abdominal** and **Renal Dropsies,** and Dr. Lee says that he has used it with success in the treatment of dropsical affections of broken down constitutions and intemperate persons. Dr Coe says that it is specially serviceable in chronic diseases of the genito-urinary mucous membrane, as in **Chronic Catarrhal affections of the Bladder, Chronic Nephritis and Urethritis,** attended with a purulent or profuse mucous discharge. It is also beneficial in calculous and prostatic diseases and other affections of the urinary organs attended with local debility.

Dr. Hale, "New Remedies," p. 199, relates a case of a young woman who had distressing **Dysuria.** The urine was scanty with mucous sediment, voided frequently, with pressing pain *before* and scalding *after* micturition. After using a large number of remedies without result, he employed at the suggestion of an old nurse a decoction of chimaphila. There was an improvement the next day, and in a week the dysuria was nearly removed, the sediment had almost disappeared, and at the same time the constipation and digestive derangement, from which she had suffered for a long time previously, were quite cured. In fourteen days she was quite well

Dr. Hale notices that it has one decided effect, viz., to cause mucous sediment to disappear from the urine, and he recommends it in **Albuminuria** as well as it in vesical catarrh. It is also useful in very chronic cases of **Gleet,** when a slight discharge remains after the other symptoms have abated. We cured one case of this kind after the failure of two distinguished specialists to effect any relief, with this drug alone. In another case where this drug failed, and we were unable to determine whether the very slight discharge came from gleet, or was merely prostatic, we effected a rapid cure with the tincture of berberis.

Dose.—Liq. Ext. ♏ 1 to 10; Tinct. ♏ 5 to 20.

CHLORATE OF POTASSIUM.

Dr. Marchant records numerous experiments on the dog, and a number of cases of poisoning to show the poisonous action of the chlorate when administered too freely. See "Archer. f. exp. Path. u. Pharm.," vol. xxii., 1886. It appears to destroy life primarily by altering the composition of the blood corpuscle.

CIMICIFUGA RACEMOSA.

Dr. Coloin, in the "Philadelphia Medical and Surgical Reporter," strongly advocates the use of cimicifuga in the treatment of **Chorea** and **Rheumatism.** During thirty years he has given it uncombined for these diseases with the best results. He finds that any dose exceeding 20 minims at the beginning of the treatment is likely to produce "an atrocious headache."

CLOUDBERRY (Rubus Chamæmorus).

Dr. Ivan Troïtzky adds his testimony to the evidence we have already published in previous editions of the "MEDICAL ANNUAL," concerning the value of this drug as a *diuretic.* The following is the author's way of preparing the infusion: He puts 2 drachms of the dried leaves (not too old) into a teapot, and pours over the leaves two teacupfuls of boiling water, and keeps the vessel during the night in a very warm place to use the infusion in the course of the next day (a cup in the morning, another in the evening). "Its taste is not very nasty, and becomes the less nasty the more the patient is habituated to the infusion." The author gives at length his own case: He is 80 years old, and has suffered from **Œdema Pedum,** for more than ten years (chiefly every spring, but often also during summer, when the latter happens to be wet). At first he used adonis vernalis and other diuretics, as well as elastic stockings; and obtained some benefit from them; but afterwards the said means ceased to bring any relief. Hence about five years ago, he was compelled to resort to the infusion of cloudberry leaves, massage, and elastic bandage. The results were most satisfactory on every occasion. Under the use of cloudberry, the daily amount of urine always amounts to 54, 60, 72, 83 ounces (to sink, after discontinuing the drug to 55, 45, 40, 38 ounces). Each time a month's treatment of the kind proves sufficient to remove œdema and pain.

COBRIC ACID.

Dr. Winter Blythe, in 1876, attempted to separate the active principle of the venom of the cobra. Dr. Wolfender has since repeated the process, ("Jour. of Physiology." 1886, vol. vii.), and he came to the conclusion that the crystals described by Blythe were only those of sulphate of lime, and that the so-called cobric acid and this innocent salt are identical.

COCAINE (or CUCAINE).

The direct action of this drug upon the nerve trunks has recently been investigated by Kochs. ("Centl. f. klin Med.") He demonstrated,

by a series of ingenious experiments on animals, that, when a concentrated solution of cocaine is brought in contact with a nerve-stem containing both sensory and motor fasciculi, conduction in the former is abolished in an exceedingly short space of time. Thus, after placing a small quantity of cocaine crystals upon the exposed sciatic nerve of a frog, abolition of sensibility was obtained in about one minute in those portions of the integument supplied by the nerve. On releasing the frog from the operating-table and placing it upon the floor, it was seen, however, that the motor fasciculi of the nerve were entirely unaffected, since the animal's movements were in all respects normal. It must be borne in mind, however, that the phenomena just described are those observed after short applications of the anæsthetic. When, however, the applications of cocaine to the nerve are prolonged and oft-repeated, abolition of conduction in the motor fasciculi ultimately takes place. This fact is well-shown by the following experiment :— The sciatic nerve of a rabbit was carefully exposed and repeatedly treated with cocaine. At first the transmission of centripetal impressions was abolished (sensory paralysis), and ultimately centrifugal conduction was also arrested at the cocainized segment of the nerve (motor paralysis). From these researches it is evident that, when cucaine is applied to the trunk of a mixed nerve, sensory, and finally motor, conduction is abolished temporarily.

Coca as a *cardiac stimulant* is well known, and various preparations of coca wine have long been popular. Cocaine has been employed for a similar purpose by Prof. Da Costa, especially in low forms of **Fever**, and he records cases in which it proved successful after the failure of alcoholic stimulants and digitalis. See "Philadelphia Medical Times," Feb. 5th, 1887.

Noorden, ("Berliner klin. Wochenschrift," No. 51, 1886), has also had good results (*véritablement merveilleux*) in **Pseudo-angina Pectoris.** He offers no explanation of its utility, but compares its action in these cases to that obtained by Bescharner in **Bronchial Asthma.**

As a *local anæsthetic in surgical practice*, it has been extensively employed at the Kars Military Hospital. Dr. Gretchikhon reported numerous operations : circumcision, tonsillotomy, amputation of fingers, iridectomy, enucleation of glands and cysts, in which its anæsthetic properties proved a complete success, pain only being felt when deep tissues were cut, and this was abolished by pouring a few drops of the cocaine solution upon the wound. A 16 per cent. solution was employed, and of this ½ to 1½ syringefuls were injected (equivalent to 1 to 3½ grains of the drug). As a *dental anæsthetic*, this author

did not obtain very satisfactory results in cases of extraction, but found it a useful analgesic for inflammation of the pulp cavity.

On the other hand, Mrs. Elena F. Vongl-Sviderskaia, a dentist of St. Petersburg, reports twenty-five cases of tooth-extraction, in which, to relieve the pain of the operation, she had employed injections of a 20 to 30 per cent. solution of cocaine. About a ½ of a syringeful (containing 4½ grains of the alkaloid, when a 30 per cent. solution was used) was slowly injected into three points: into the process of the gum between the teeth, then under the gum on the buccal side of the tooth, and, lastly, at a corresponding spot over the lingual side. After waiting for five or seven minutes, she proceeded with the extraction. In all of the cases, either great relief or complete absence of pain was obtained. As to accessory unpleasant symptoms from the use of such a large dose of cocaine, she noted only mental depression with drowsiness in one case, and intense oppression in the chest, dilatation of the pupils, accleration of the pulse and breathing, and mental excitement in two others. The remaining twenty-two patients presented no toxic symptoms whatever. ("Med. Record," July, 1886).

Mr. Woodburn at a meeting of the West of Scotland Branch of the Dental Association, spoke also of its value as an application to exposed pulps previous to the application of an escharotic. As a result of a discussion which took place at the meeting, it was decided that the most successful cases were in children under fourteen years of age, and when no inflammation was present.

Mr. Vian has obtained better results from the combination of carbolic acid with cocaine. He found that two parts of cocaine dissolved by the aid of warmth in one part of carbolic acid yielded a syrupy fluid, a drop of which applied to the tongue or gums produced complete insensibility of the parts to pain. His method is as follows:—1 grain of cocaine is dissolved in 10 minims of the carbolised solution and slowly injected, half on the labial and half on the lingual or palatal aspect of the gum at a spot situated half-way between the neck of the tooth and the presumed end of the root. A finger of the left hand should be kept over the site of puncture to prevent escape of the fluid, and the surrounding parts should be protected by pledgets of cotton wool. Having made the two punctures, the patient is given fresh water to rinse the mouth, and five minutes are allowed to elapse before beginning the operation. He had operated on eighty-six patients in all. No disturbance, except of an emotional kind, ever followed, and the result in all the cases was very successful. In a

series of cases where he employed the carbolised solution alone the result was also very good, and he is disposed to consider that carbolic acid is as efficient a local anæsthetic as cocaine for dental purposes.

Dr. Bignon has suggested that a solution of cocaine in liquid vaseline is a useful way of employing its anæsthetic properties. It is only soluble in this menstrum to the extent of 2 per cent., which would practically limit its use in this way to ophthalmic practice.

Toxic effects of cocaine. Many warnings continue to be written respecting the toxic effects produced by the application of this drug. We summarised the principal symptoms in the MEDICAL ANNUAL, 1887 (p. 87). Dujarden-Beaumetz, and others record cases where doses of one-third of a grain have produced marked symptoms.

Cocainomania is a new disease corresponding to morphiomania. It is the result of the employment of this drug as a stimulant, to which there is a growing public addiction, some cases having resulted from the use of cocaine as an antidote to the morphia habit. Erlenmeyer ("Deut. Med. Zeit.") describes the symptoms as those of vascular paralysis; there is quick pulse, profuse sweating, disturbed respiration and syncope. Progressive emaciation follows, and sleeplessness, delusions, and hallucinations, nervous depression, and loss of memory being constantly observed.

Antidotes to cocaine. In case of poisoning the inhalation of *nitrite of amyl* is probably the best agent to employ. For the after effects *caffeine* has proved successful in the hands of Dr. Martin, ("Jour. de Med.," January 2nd, 1887). Dr. Bignon, of Lima, points out the antagonism of strychnine to this drug, and suggests its employment in these cases. It seems probable that moderate doses of strychnine and hyoscyamus would prove very effectual remedies for cocainomania.

COD-LIVER OIL PLASTER.

Dr. Vidal has made a plaster which greatly facilitates the application of this substance in skin disease. The following is the formula:

℞ Simple Plaster with Litharge and Cod-liver oil	600 parts	Cod-liver Oil	350 parts
Yellow Wax	250 ,,	Dextrin	20 ,,

Water enough to dissolve the Dextrin.

This plaster has given him excellent results, not only in polymorphous **Lichen** (prurigo of Hebra), but also in all other obstinate lichenoid affections of the skin. He has used with equal service the following:

℞ Simple Plaster	600 parts	White Oil	400 parts
Yellow Wax	250 ,,	Dextrin	20 ,,

Water enough to dissolve the Dextrin.

COLLINSONIA CANADENSIS (Stone-root).

This remedy was used by the North American Indians for the healing of sores and wounds, and it has since been used as a popular remedy for headache, colic, and indigestion. We owe our more exact knowledge of its therapeutic properties to Drs. Hale and Burt.

The clinical indications for the use of this remedy are thus excellently described by Dr. Ludlam: "It is specially adapted to women, and to those women who have **Hæmorrhoids** either during, or as a sequel to pregnancy and parturition, or in complication with obstinate constipation or chronic inflammation, with slight displacement of the womb. For the first of these cases, when the trouble dates from gestation or from labour, or from both, and the condition has become chronic, there is no remedy to compare with it for efficacy." . . . . When the hæmorhoids are associated with constipation, and with a mild form of retroflexion or retroversion, and especially with prolapse of the uterus, it will often relieve the whole difficulty.

It has also been recommended by Dr. Paine, of Philadelphia, for **Valvular disease of the Heart**, following rheumatic fever. Dr. P. H. Hale also reports favourably of its use in a case of this kind.

Dose.—Liq. Ext. ♏ 2 to 10; Tinct. ♏ 5 to 30.

COLLODION.

The following formula is used to prepare a calming and adhesive preparation suitable for neuralgias, or tender, inflamed, or abraded surfaces. Pieces of linen or silk dipped into it answer the same purpose as the so-called "court plaster." Mastic ʒiij., balsam Peru ʒj., narcotine ʒj., chloroform ʒvj. The three first substances must be powdered separately and then added to the chloroform.

COLOMBINE.

M. Roux has observed the effect of pure colombine on fowls, the only animals which he has been able to get to take the medicine by way of the mouth. The symptoms produced by the ingestion of the poison were those that are associated with fatty degeneration of the liver and destruction of its working elements. Colombine irritates the intestinal tube, causing increased secretion from the gastric, intestinal and biliary surfaces. The occurrence of these serious symptoms makes it necessary that the administration of the drug to human beings should always be in the form of small doses. The daily dose to commence with should not exceed one centigramme of the alkaloid and the powders of columba are to be preferred to the less certain alcoholic and ethereal liquid extracts.

CONVALLARIA MAJALIS (The May Lily).

The trials of this drug as a substitute for digitalis have not on the whole been very satisfactory. Dr. J. N. Nathanson ("Vrach," Nos. 1, 2 and 4, 1887) has made a very elaborate study both of the action of the drug, and the causes of its failure in the hands of various observers who had employed the "chemically pure active principles" in their experiments. His first step was to have these analysed. The first preparation of convallamarin obtained by him from Merck (in 1885), proved to be a mixture of that glucoside with convallarin and some products of decomposition of both, as an analysis by Professor A. A. Loesch had established. He then obtained the purest glucosides from Merck to be given in four cases of disturbed compensation (in a patient aged 15, with aortic regurgitation and relative mitral insufficiency; in two patients, aged 57 and 40, with aortic regurgitation alone; and in a patient, aged 48, with mitral regurgitation and stenosis). The result of these experiments was to show that convallarin was useless, and only produced symptoms of nausea, diarrhœa, and gastric pain, while convallamarin proved useless in the first case (where other remedies had previously failed). But in the remaining three patients a rapid and striking improvement ensued; the pulse became slower and more regular, the amount of urine augmented, dropsy decreased, and all other signs of disturbed cardiac compensation gradually and steadily disappeared. The effect of increasing doses was to produce salivation, nausea and giddiness; but no cumulative action was noticed. Dr. Nathanson's conclusions are, therefore, favourable to this drug as an agent for restoring disturbed compensation; but the necessity of selecting an absolutely pure preparation is of paramount importance.

The "London Medical Record," July 15th, 1887, gives a list of 60 papers which have been written upon this drug.

COPPER.

The physiological action of this metal has recently been investigated by Dr. Curci ("La Medicine Contemporanea," April and May, 1887). Administered to frogs, he finds that it causes paralysis of the cerebral motor centres, and paralysis of the organs of circulation. In dogs, copper causes first paralysis of the reflex centres of the cord, then of the cerebral centres of sensation, and lastly of the cerebral and spinal motor centres. Reflex action and sensibility to pain are abolished before mobility is affected. It at first stimulates the intra-cardiac excito-motor nervous system and the vaso-motor nervous system generally; and causes increased arterial pressure; it then paralyses it, and causes lowering of the arterial pressure and enfeeblement of

the pulse. It abolishes the excitability of the cardiac and vascular excito-motor nerve apparatus. It lowers the temperature by dispersion of heat; this, and the circulatory paralysis, account for the adynamia and collapse in cases of poisoning of certain duration by the salts of copper. Death is caused by respiratory paralysis, pulmonary œdema, depending on vaso-motor paralysis and cardiac paralysis. Copper is firstly and chiefly a nerve poison. Injected into the veins or hypodermically it does not cause vomiting. Its action bears a pharmacological resemblance to that of gold and silver.

CUPREINE.

Cuprea Bark (Remigia pedunculata) contains an alkaloid which Howard named in 1881 Homoquinine; this, it has been found, can be split up into quinine and another alkaloid which has been called Cupreine. This has been manufactured by Messrs. Howards & Sons, but we are not aware of any investigations into its therapeutic properties.

CURARA.

The action of this drug has been re-investigated by Dr. S. Pollitzer, of New York, under the direction of Kühne, of Heidelberg. The result of his elaborate experiments is to show that this drug does not paralyse the nerve terminations throughout its whole length, but that it leaves unaffected certain terminal nerve elements in the muscle, and that it affects some part of the nerve fibres between the nerve stems and their ultimate ends in the muscle fibrillæ. He concludes, but is not able to establish the fact, that the part affected by the drug is the cement substance at the nodes of Ranvier, which is so altered that the nervous impulse is no longer transmitted through it. See Journal of Physiology, vol. vii., p. 274-282.

CYPRIPEDIUM PUBESCENS (Yellow Ladies' Slipper).

Preparations of this plant have been employed in America as a nervous stimulant and antispasmodic, and it has acquired the name of American valerian in consequence. We do not know of any exact enquiry into its medicinal properties, except those of Dr. Paine mentioned in "Hale's New Remedies." He took one drachm each day and found it first stimulate the brain and nervous system, and on the third and fourth day cause a sense of weight and oppression on the mind, with a slight disposition to drowsiness, as if he were more under the influence of a sedative than a narcotic. He has employed it in **Epilepsy** (due to reflex nervous irritation), **Chorea** (when due to nervous exhaustion), **Spermatorrhœa** (accompanied by nervous prostration and dejection of spirits), **Amenorrhœa** (accompanied by

Nervous Debility and despondency) **Dyspepsia** (due to nervous exhaustion). He has also used it in **Typhus** and **Typhoid Fevers**, and in combination with lupuline as a sedative in **Delirium Tremens**. Dr. Paine used the active principle *Cypripedin*, which he gave in doses of 1 to 2 grains. The tincture of the root is given in doses of 5 to 15 minims ; and tritutrations of the dried root have also been employed.

DIETHYLACETAL

Has been proposed as a substitute for chloral and other hypnotics by Von Mering. It has a hot bitter taste, soluble in 18 volumes of water, and freely soluble in alcohol. The opinions of various observers differ as to its value. Von Mering states that a dose of 2 to 3 drachms is sufficient to cause sleep without unpleasant after effects, and M. Stoltenhoff came to similar conclusions. But in the hands of M. O. Bergen and Leyden, the hypnotic effects proved unreliable and transient, while in some cases giddiness, flushing of the face and vomiting occurred.

DIOSCOREA.

This drug, when a reliable preparation is employed, gives very remarkable results in cases of **Entralgia** and so-called **Bilious Colic**. It is known in America as the colic root, and has great popular reputation as a remedy in all forms of colic, whether abdominal, renal, or hepatic. It appears to be an especial stimulant to the nerve centres supplying the abdominal organs, and particularly to the umbilical plexus. It appears to relieve not only spasmodic affections of the abdomen, but symptoms in other parts of the body due to irritation of these organs ; thus it has attained some reputation in the cure of the **Vomiting of Pregnancy, Pseudo-angina Pectoris, Spasm of the Spermatic Cord.** It also appears to have been used with success in some forms of **Spinal Irritation.**

The powder of the dried root or the active principle dioscorein are the most reliable preparations, care being taken that the drug is obtained from a reliable source, a species of smilax being constantly substituted for it.

DOSE.—Powdered Root grs. 2 to 5 ; Dioscorein gr 1 ; the dose being repeated every second or third hour.

DISINFECTANTS.

Form the subject of an article contributed by Dr. Elliston to the "Brit. Med. Journal," Oct., 1886. He says, as ordinarily practised, disinfection is little more than deodorisation. The great secrets of successful nursing are cleanliness and ventilation, and it is possible

to secure these without disinfectants at all, provided there be an abundant supply of clean bed and body linen. Professor Koch has tested the ordinary disinfectants in three ways. (1.) Whether a particular disinfectant is capable of destroying the resting spores of bacilli, which are the most difficult of all forms of life to destroy (2). As to its behaviour in regard to more easily destructive fungi, such as yeast, bacteria, bacilli, and micrococci, (3.) Whether the disinfectant was capable of arresting the development of the micro-organisms in suitable nutritive fluids. Carbolic acid in a 5 per cent. solution only sufficed to arrest the development of spores after two days, while a 1 per cent. solution was sufficient to destroy, in two minutes, the bacilli themselves. A solution of 1 in 850 sufficed to check the development of the latter. Carbolic acid in oil, or in alcoholic solutions is absolutely without effect on the bacilli and spores. The only reliable disinfectants are chlorine, bromine, and corrosive sublimate; certain ethereal oils and allyl-alcohol are also to be trusted. Bromine vapours are to be recommended for confined spaces. In corrosive sublimate we have an invaluable germicide; solutions of 1 in a 1,000 to 1 in 15,000 are sufficient to kill micro-organisms. A solution of 1 in 1,000 is sufficient to kill resting spores in ten minutes. The value of fumigating rooms by sublimate has been thoroughly tested by Professor Konig. The method he adopts is very simple. After closely shutting the windows of the infected rooms, the person who carries the disinfectant sprinkles about 50 or 60 grammes of the sublimate on a coal shovel, over a glowing fire-pan, and then quickly leaves the room and locks it up for three or four hours. The door is then opened, and on opening the windows care must be taken to hold the cloth over the nose and mouth. The door is immediately locked again, and the room is aired for several hours; then the windows are once again shut and the room is fumigated in the usual way with sulphur, in order to render harmless the mercury which is still present. In boiling water we have a perfect disinfectant; no contagion can resist a moist temperature of 212° F., but the action of dry heat for three or four hours at 302° F. will not destroy earth-spores. In large disinfecting laundries the women engaged sometimes suffer from handling the linen before it is boiled, but not after it has passed through the disinfecting process.

DRUMINE.

The value claimed for this substance as a local anæsthetic still remains to be proved. A specimen sent to Prof. Alex. Ogston, of Aberdeen, was submitted to experiment, but proved a distinct failure;

but it is probable that the specimen had undergone decomposition during transit from the Antipodes. Dr. John Reid isolated it from the euphorbia drummondii, and made experiments upon cats and upon himself, and found it to possess considerable anæsthetic properties. An injection of 4 minims of a 4 per cent. solution quickly relieved a case of **Chronic Sciatica**, and a second injection effected a cure. It relieves cases of **Sprain** so promptly that lead lotions will be forgotten. Dropped in the eye it produces insensibility of the eyeball, and relieves tic. Placed on the tongue it produces anæthesia, and loss of taste even to quinine.

ERGOTINE.

Dr. S. L. Savitski in an article upon this drug ("Vrach") calls attention to the similarity of the action of quinine and ergotine. Both, he says, undoubtedly cause contraction of the uterus and the spleen, the effect of quinine on the uterus having been scientifically worked out in a dissertation published by T. T. Smolski in 1876, and that of ergotine on the spleen having been shown by Dobodchiki ("Vrach," 1880), and by Semchenko ("Vrach," 1883). This similarity led him to think that one of these drugs might serve as a substitute for the other, and he therefore made a large number of observations on the effect of ergotine upon the cases of **Intermittent Fever** occurring in the Lubinski regiment with excellent results, especially where an enlarged and tender spleen was present. He finds that a combination of ergotine with quinine acts very satisfactorily, and that in this way considerable quantities of quinine can be saved, as half the dose of quinine which would be required if given alone will suffice if combined with ergotine. The preparation of ergotine used was Bonjean's, the dose in chronic cases being about a grain three times a day.

ETHYL BROMIDE (Hydrobromic Ether).

This is usually prepared by distilling a mixture of alcohol, bromine, and phosphorus. It has been mostly employed as an *anæsthetic* in the following combination : ethyl bromide, 1 part; chloroform, 3 parts; alcohol, 4 parts. Langaard has recently re-directed attention to its properties, and M. C. Traub gives a full account of the various experiments respecting it. ("Der Fortschritt," No. 12, June 20, 1887, which is abbreviated in "London Medical Record," August 15, 1887).

The main difficulty of the experimenters has been to obtain a pure preparation; the phosphorous method leads to the introduction of arsenic, while the iron method gives rise to the presence of sulphides. Traub therefore gave up both these methods in favour of that recommended in the "French Pharmacopœia." He thus produced a perfectly

pure preparation, and the following are the characters which such a preparation should possess. It should be colourless, with a specific gravity of 1·385 to 1·390, volatile with *no* residue; its odour should be pleasant and etheric, not pungent or garlic-like. Sulphur may be tested by agitating it with *pure* sulphuric acid. The mixture after three or four days should remain unchanged; sulphur will give it a yellow character. For other tests we refer to the papers quoted. Traub considers that the pure preparation will be a very expensive, but useful anæsthetic.

EUCALYPTUS HONEY.

This is the honey made by a bee as yet unknown to science, and which has been called *apis nigra mellifica* on account of its being nearly black; it is also much smaller than other bees. It feeds upon the flowers of the eucalyptus tree, which is avoided by other kinds of bee.

The honey is a dark orange-coloured liquid, of which one thousand parts contain, 611·6 sugar (mostly levulose), 1·8 parts ash, 215·6 parts of water, and 171 parts of various matter, comprising eucalyptol, eucalyptene, terpene cymol, and odoriferous and resinous matters.

A tablespoonful given to a man caused the voice to become clearer, the lungs to expand more freely, and the breath became perfumed with eucalyptus. Dr. Caraman thinks it will prove useful in **Bronchial Catarrh**, and as a cardiac sedative, and also as a febrifuge and antiseptic.

It is produced in enormous quantities in Central Australia, but we believe none has come to this country as yet. It was discovered by M. Guilmeth, and Dr. Caraman's paper will be found in "Le Progrès Médical," April 17, 1887.

EUGENOL.

This is the principal component of oil of cloves. It has been recommended as an *antiseptic*, and is said to be superior to phenol. It is also said to have some antipyretic properties, but these are inferior to quinine, salicylic acid, and antipyrin. ("Amer. Journ. of Pharm.," March, 1887).

It is insoluble in glycerine and water, and is obtained as residue when oil of cloves is subjected to distillation with strong caustic alkalies. After the so-called light oil of cloves is distilled off, sulphuric or phosphoric acid is added, and by continuing the distillation without access of air eugenol is obtained. Eugenol is an oily, colourless liquid, possessing the odour and taste of oil of cloves in the highest degree. In contact with air and light it soon acquires a brown colour; it boils

at 247·5° C., and have a specific gravity of 1·078 at 0° and 1·063 at 18·5° C. When taken internally the greater part of it is eliminated by the urine, in which, however, it cannot be detected by its odour nor by distillation, but, if allowed to decompose, the characteristic odour is at once perceptible; and when extracted with alcohol shows the characteristic deep-green coloration with ferric chloride. Eugenol has been given in doses of 3 grammes per day, dissolved in alcohol and diluted with water.

EULYPTOL.

Under this name Schmeltz has described a combination of salicylic acid, six parts; carbolic acid, one part; essence of eucalyptus, one part. It is soluble in alcohol and ether, but sparingly so in water. It is useful as a *surgical antiseptic*. It has, of course, some antipyretic properties, and is likely to be of value, internally, in **Rheumatism** and **Bronchial Catarrh**. Given to typhoid patients, it served to disinfect the stools, but experience is against the employment of salicylic acid in **Typhoid Fever**.

EUPHORBIA HETERODOXA.

This is the juice of the Brazilian alveoloz, and has been recommenced by Dr. Barnsfather as a local application in **Cancer of the Uterus**. (See "N. Y. Med. Journ.," June 4, 1887). He found the application to the os produce intense burning in the vagina, lasting from two to four hours. Absorption of the medicine evidently takes place, as in six hours after each application profuse discharges from the kidneys of a highly coloured and offensive urine commence, and continue at intervals of about three hours. The local bleeding ceased after about three applications to the os, and the pain was very much diminished. He found the peculiar action of the kidneys was produced in all cases in which he used the drug, which he regards as a valuable local remedy.

FERRUM.

In the "Medical Annual," 1887, we called attention to the value of a saturated solution of phosphate of iron in phosphoric acid (dil) as a remedy for **Constipation**, especially in those cases of an inveterate character, which occur in the subjects of hysteria and mental disorders. It is those cases where there appears to be great loss of muscular power in the lower bowel, and where purgatives prove valueless in which it proves effective. Our further experience with the remedy confirms our original statement, and shows that its effects are not palliative, but curative.

We administer doses of 5 drops in a wine-glassful of water three

times a day. As the solution is precipitated on exposure to the air, it is necessary that each dose should be mixed at the time of administration. It is also necessary that the medicine should be kept and dispensed in dark glass bottles.

Dr. J. K. Spender has also made an independent study of the value of iron in **Constipation**, and has published ("Practitioner," March, 1887), an article on its value under the title of "Rational Therapeutics of Constipation." In this the author desires rather to point out that sulphate of iron increases the laxative qualities of aloes. He recommends a pill containing from ¼ to ½ gr. of ext. aloes (socot), and 1 gr. to 1½ gr. of ferri sulph. In some cases he finds ⅙ to ⅛ grain quite sufficient.

A recent article in the "Progrès Médical," speaks very highly of Rabuteau's dragees of iron. Each of these contains $\frac{7}{10}$ grain of a chemically pure ferrous salt; and they are said to be so prepared that it is "unnecessary for the stomach to act upon them before they enter the circulation." Some observations made by Professor Potain in cases of **Anæmia**, at the Necker hospital, appear to show that great improvement took place in patients who took two of these dragees morning and evening.

FLUORIDE OF IRON (see Fluoride Salts).

FLUORIDE SALTS.

Dr. John Lucas has called attention to the value of these salts as a remedy for **Hypertrophy of the Spleen.** ("Practitioner," p. 415, 1867).

The *ammonium fluoride* (NH_4F) is prepared by saturating a solution of hydrofluoric acid (HF) with ammonia (NH_3), and allowing the mixture to evaporate over quick-lime. It crystallises in hexagonal prisms, dissolving readily in water, and the solution is colourless, but owing to its chemical action on glass it is necessary to coat the inside of the bottle with wax; or the solution may be kept in india-rubber tubes or gutta-percha bottles. The strength of the solution employed was four grains to the ounce; this forms the liquor ammonii fluoridi, of which Dr. Lucas gives doses of five minims in an ounce of water thrice daily *after* meals; the dose subsequently being increased gradually.

He also employs the *fluoride of iron* (Fe_2F_6). This is prepared by saturating a solution of hydrofluoric acid with the hydrated peroxide of iron, and then evaporating. It is a yellowish brown powder, dissolving in water, but somewhat slowly, and forming a brown solution. This salt does not attack glass, and is more stable than the ammonium salt. This was employed in half drachm doses of a solution of the

same strength as the ammonium salt. The cases of enlarged spleen, recorded by Dr. Lucas, were chiefly treated with the first-named salt, and considering the nature of the disease, the results were very satisfactory.

It seems probable that these salts will prove valuable. The fluoride of quinine has already been used with success in **Chronic Splenic Enlargement** (see "Lancet," vol. ii., p. 559, 1884); and dilute hydrofluoric acid has won considerable reputation in the treatment of **Goitre**, for which the fluoride of iron should prove a valuable remedy.

FORMIC ACID.

Dr. A. J. Voitoff, of Moscow, has made a number of experiments with this substance, with a view to determining its *antiseptic* properties ("Proceed. of the Moscow Physico. Med. Society," Nos. 4 and 5, 1886). He concludes that: (1.) Formic acid, even in minimum doses, inhibits the development of the putrefaction-microbes as well as destroys the latter in about a week. The first culture of microbes which appears in solutions of minimal quantities of the acid is of a mouldy and not of a bacterial kind. (2.) The said property of formic acid is by far more intense than that of carbolic acid. (3.) Formic acid "may be regarded as a specific disinfectant means in relation to the putrefaction-microbes, since, while destroying the culture, it alters but little the nutritive medium, as is specially obvious in the comparison with the action of carbolic acid." (4.) The vapours of formic acid disinfect the air as far as the putrefaction-microbes are concerned.

GALIUM APARINE (Goose Grass.)

According to Dr. George Foy, ("Medical Press," June 16, 1886,) this plant has long been used as a popular remedy for **Scrofula, Cancer,** and to stay bleeding. It is mentioned as a remedy for scrofula and **Hæmorrhages** by Paulus Ægnieta, and as an *aphrodisiac* by Dioscorides. Among the Arabian physicians, Avicenna, Rhases, and Eben Baither recommended it. Culpepper, Quincy, and Lewis include it in their list of therapeutic agents, and Dr. Robert Hooper (Dict. Med.) mentions its use as a remedy for cancer to condemn it. The popular use of the *G. verum* as a styptic is mentioned by Gray; but, although he names the *G. aparine*, he does not say if it has any medicinal value.

The plant is very common in English-hedgerows. It flowers in June and July, and has a pretty white flower, and is easily recognized by its globular seed-like bodies with hooked prickles, by which they adhere to the skins of animals, and so become widely dispersed. Its

introduction to modern practice is due to Dr. Winn, who, in 1854, read his paper on "Galium Aparine" before the Medical Society of London. His attention was first drawn to the plant by a patient who had long suffered from **Lepra Vulgaris**, and had taken all the usual remedies in vain. He informed Dr. Winn that he had at last discovered a remedy for this troublesome complaint in a common wild plant of which he did not know the name. Dr. Winn found the plant to be *Galium aparine*, and, on making inquiries, learned that three other persons in that district had been cured by the same remedy. Dr. Winn tried it in nineteen cases of skin-disease,—five were cases of lepra, six of **Psoriasis**, four of **Eczema**, two of **Lichen**, one of inflamed **Acne**, and one of ordinary coloured syphilitic eruption. In nine of these cases the benefit derived from the medicine was very striking. Dr. Bully, of Bucks hospital, forwarded to Dr. Winn an account of three cases of **Cancer** in which the *G. aparine* appeared to exercise an influence in checking the disease. The preparation used by Dr. Winn was an inspissated juice in ʒiv-doses (?) three times a day. A formula for an infusion and ointment is published in Beasley's "Pocket Pharmacopœia."

Eight years after Dr. Winn's paper Dr. Ogle recommended the drug as a remedy for **Epilepsy**, and quite recently Surgeon-Major Orwin draws attention to the benefits derived from its use in an obstinate case of psoriasis of the left hand of twelve months' standing, after chrysophanic acid, tar ointment, arsenic, etc., had been tried in vain. The rash disappeared by the use of *G. aparine* taken as an infusion and externally applied as a poultice. ("Therapeutic Gazette.")

GELOSINE.

At a recent meeting of the Société de Thérapeutique, M. Guérin read a paper on Gelosine. This is a mucilaginous substance extracted from *Gelidium corneum*, an *alga* of Japan, which is currently sold in the form of dry whitish sprays. Gelosine is an excellent excipient, mixing easily with all pharmaceutical substances, soluble in water, in alcohol and water, and in acidulated or alkaline water. It also serves as a medium for salts, powders, and different tinctures. Thus it is of great service in preparing suppositories. Gelosine gradually contracts, and expels the water and medical substances it contains, which thus spread over the surface of wounds or cavities, in which it is placed in any form. Gelosine thus gradually regains its original volume, and can be used more than once for the purposes enumerated. It is evident that gelosine is preferable to liniments and salves. M. Guérin showed specimens of cylinders and slabs of gelosine contain

ing camphor, creosote, sulphate of zinc. The quantity necessary should be put into its weight of hot water, the therapeutic agent chosen is then added and incorporated by means of the most successful method. When the mixture becomes as thick as syrup it is poured into moulds. These operations are effected in a quarter of an hour. The expense is slight. Gelosine sterilised might be utilised in bacteriological researches.

GINSENG.

This is a favourite Chinese remedy. A report upon it by Mr. Foulk, the American consul to the Corea, is alluded to in the "Pharmaceutical Journal" for August 28th, 1886, from which we learn that the plant is cultivated in the Corea, and that the ginseng is of two kinds, the red ginseng (hen-glum) and white ginseng (pak-lum). Both kinds, however, are from the same plant, the white ginseng being the root simply washed and dried, and the red the root after having been submitted to a process of curing. This is a monopoly of the government, red ginseng not being an article of ordinary trade, but the whole of the crop being carried to China, and the proceeds of sales going to the king! White ginseng is used enormously in the Corea as a strengthening and blood-purifying medicine, the natives preferring it to the red, which, they say, loses strength in the curing. The most esteemed ginseng should consist of the roots of wild plants at least thirty years old, and commands fabulous prices. Mr. Foulk says that from personal experience and observation he is satisfied that ginseng is an active strongly heating medicine, but caution is required in its use, as it sometimes causes boils and eruptions, sleeplessness, and flushing of the body. It is most commonly taken in the form of a concentrated infusion, but sometimes the sliced fresh root is eaten with honey. Notwithstanding the general impression among Western nations that the virtues attributed to this drug are imaginary, Mr. Foulk thinks the evidence is in favour of the mystic value having been attached to it after its virtues had been practically ascertained.

GOSSYPIUM HERBACEUM (Cotton Root).

Dr. Henry Garngues ("New Yorker Mediz Presse" and "Therapeutic Gazette,") reports one hundred and thirty-nine cases of uterine disease in which **Hæmorrhage** was a prominent symptom treated with this drug, with the result that one hundred and twenty-five cases were relieved, and the rest not.

He found the liquid extract of very little use, owing to the large dose necessary being not well tolerated, and he substituted a decoction made by pouring a pint of boiling water upon three large tea-

spoonfuls of the root; after it has been allowed to stand for fifteen minutes, it is strained and drunk cold, in three portions, morning, noon, and night.

This decoction has tonic properties which are of value, as preparations of iron are contra-indicated until all tendency to bleeding has ceased. Patients should take it for months. During menstruation they should discontinue it for from two to four days, according to the amount of blood lost, when it should be resumed again. Like all other remedies, it is not a specific; in some patients it fails entirely, while other remedies, especially ergot, give relief; in other cases all hæmostatics are absolutely useless. He has found it, however, preferable to all other remedies in the majority of cases. It seems to have a most remarkable effect in neoplasms; in fibroids it very often not only relieved the hæmorrhages, but also the pains. Even in cases of cancer and sarcoma of the uterus, he found it very beneficial as a hæmostatic and tonic.

GUACHACATA.

M. Crescencio Garcia proposes to substitute for quassia, gentian, quinine, etc., the flowers of a Mexican plant commonly called guachacata, and promises further information about the botany of the plant. Garcia prepares a bitter elixir by extracting first with alcohol and then with water and mixing the products; this is done because the plant contains two chief bitter principles, one soluble in alcohol, the other in water. The formula runs thus: guachacata flowers, 30 grammes; rectified spirits of wine, 300 grammes; sweet orange peel, 15 grammes. Macerate for a week or a fortnight in sunlight; express; treat the residue with a little boiling water; express; mix the liquids. ("Lond. Med. Record," December 15, 1886).

GUACHAMACA TOXIFERA.

This plant, which belongs to the apocynaceæ, has been shown by Schiffer to have an action similar to curare. He considers it superior to the drug in **Tetanus** and **Rabies** and in its power of paralysing the motor nerves without affecting the sensory nerve or muscle. ("Pharmaceutical Record," June 15, 1887).

GUAIACUM.

Sir James Sawyer has found this drug very valuable in promoting the menstrual secretion in many cases of **Amenorrhœa**. He gives 10 grains of the powdered resin in a wineglassful of milk every morning before breakfast. He has also found it useful in some cases of **Dysmenorrhœa**. In these cases he gives ʒss to ʒj of the ammoniated

tincture in a wineglassful of water every two to three hours until the pain is relieved.

GYMNEMA SYLVESTRE.

This plant, which grows in the Deccan Peninsula and Assam, has the peculiar property of abolishing the taste both for bitter and sweet substances. Mr. David Hooper, the government quinologist, says that sugar taken after chewing the leaf, tastes like sand, and sulphate of quinine like so much chalk. It does not affect the taste of "pungent and saline things, astringents and acids." Mr. Hooper has separated an organic acid from the leaves which he calls gymnemic acid, which possesses the properties of the plant. Until the medicinal properties of the plant have been determined it is impossible to say whether it will be used as a means of disguising the taste of certain medicines.

HAMMAMELIS VIRGINICA (Witch-Hazel).

This remedy has been the subject of a large amount of investigation and discussion during the past year, but it cannot be said that any fresh information has been added either to our knowledge of its therapeutic effects or the indications for its employment.

The history of this drug illustrates very forcibly the poverty of the methods usually followed in drug investigation. It appears to have been popular as a soothing application to wounds and ulcers since the most remote period. Its popularity in this respect caused it to be introduced as a patent medicine under the name of Pond's Extract, which has obtained world-wide celebrity. It was investigated by Drs. Preston and Burrett in 1855, and Hale in his "New Remedies," 1867, collected all existing information bearing upon its action; since then, the evidence of its value has been steadily accumulating. It occurred to that enterprising firm, Messrs. Burroughs, Wellcome & Co., to bring out a special preparation of the drug under the name of "Hazeline," and to distribute this broadcast among the profession of this country. Dr. Sydney Ringer had reported favourably upon it in his work on Therapeutics, 1880, but it was not until after the distribution of these druggists' samples that the therapeutic effects of the drug came to be discussed. Having obtained possession of a drug whose remedial powers had been proved by experience, our scientific therapeuticians proceeded to investigate it. They examined it under the microscope—they made a chemical analysis—they tried some experiments upon the frog, and the general result of these investigations was an endeavour to show that it owed its virtues to the very small quantity of tannin it contained; one observer ascribed its remedial effects to the alcohol in the tincture, and several

ascribed its efficacy to the faith of the patient. It is probable that many of our readers have personally witnessed the good results of the administration of this remedy in cases *where it is indicated*, and it must occur to them that if "scientific investigation" leads to the condemnation of a therapeutic agent, whose particular range of action is already very fairly known, what chance is there of the same methods being able to discover for us the remedial powers of substances whose remedial virtues are not known?

The theory that Hammamelis owes its virtue to the small quantity of tannin it contains, is discounted by the fact that its early reputation as an internal remedy was obtained by the use of small doses of a very weak tincture. Dujardin-Beaumetz gives a more rational interpretation of its action when he states that it is a direct physiological stimulant to the muscular coat of the veins. Whether this theory is true or not it offers a very good indication for the use of this drug, for in its clinical results it appears to be to venous hæmorrhage what ergot is to arterial hæmorrhage.

But it is not only in hæmorrhage that this drug is useful. The report of its action occupies thirty-three pages in Dr. Hale's work, and as most of the clinical indications there given have been supported by independent testimony since the work was published (1866), we give some of the chief indications as a testative guide to its employment.

VASCULAR SYSTEM.—"It does not seem to affect the heart and arteries *directly*. It does not appear to control arterial inflammation, or congestion, or arterial hæmorrhage, but according to all observers it is the venous system that is affected. We have abundant clinical experience to prove that this remedy is one of the most prominent we possess for inflammation of veins, venous congestion, hæmorrhage, etc."

Dr. Preston's experiments upon himself, performed in 1851, produced "crowding fullness of blood in the head and neck, sense of suffocation, and epistaxis. Dr. Sydney Ringer (1880), also alluded to its power of causing severe throbbing pain in the head. This is probably due to venous congestion, if so, this must be a primary action of the drug; its secondary effect being to cause contraction of the veins. Those who have used large doses of the drug do not appear to have been much troubled by this symptom, probably owing to the secondary effects of the drug being at once obtained. Experiments upon this point might throw some light upon the physiological action of the drug.

If we understand that it causes a tonic contraction of the coats of the veins we can understand the results which have been obtained in

Chronic Varicosis, Phlegmasia alba Dolens, and in **Passive Venous Hæmorrhage,** whether of the nose, uterus, bladder or rectum.

There seems to be some difference of opinion whether it is as useful in phlegmasia alba, the lymphatic element playing, very often, a primary part in this affection. The only case in which we have tried it was in a young lady who exhibited it as a sequela of severe dysentery. Its effects were remarkable in respect to both diseases, and the leg was nearly its natural size by the ninth day.

Dr. Shoemaker, of Philadelphia, in a recent article ("Brit. Med. Journ." May 14, 1887), says that it is a remedy par excellence in all forms of gastric hæmorrhage, and in diseases due to a relaxed condition of the venous and capillary walls of the stomach; he also recommends it in **Passive Hæmoptysis,** and in **Menorrhagia.** His indication for it in these cases is "Anæmic patients and subjects of the lymphatic diathesis in whom the sanguinolent flow is probably due to relaxation of the muscular coat of the vessels."

Dr. Shoemaker also bears testimony to its value in varicosis, and states that prior to knowing of it his treatment of varicosis had been troublesome and unsatisfactory. He records some unpromising cases in which it gave undoubted results.

THROAT.—Dr. Hale calls attention to a condition of the fauces and throat, "which might not inaptly be designated as varicosis, the posterior fauces, uvula, and pharynx are of a bluish hue, caused by distended veins, which ramify on the surface; this causes a fullness, with cough and pain in swallowing, and sometimes hawking of dark-coloured blood, mixed with mucus. In one case of this kind the internal and topical use of hammamelis proved curative." Dr. Shoemaker also recommends it for "all relaxed conditions of the pharyngeal and laryngeal walls."

URINARY ORGANS.—In addition to cases of **Hæmaturia** in which this drug has proved very useful, it appears to have some specific effect on the mucous membrane of the genito-urinary organs, and also upon the testicle. **Seminal Emissions,** ardor urinæ and pain in the testicles have been noticed by those who have tried its effects upon themselves. Dr. Brunton ("Pharmacology and Therapeutics") states that one of his patients informed him that it invariably caused seminal emissions. Dr. Shoemaker says that it is a valuable remedy for chronic gonorrhœa and leucorrhœa administered internally.

DIGESTIVE ORGANS.—We have mentioned Dr. Shoemaker's recommendation of this drug in relaxed conditions of the stomach, he

also claims it as a *gastric tonic* and a sedative. He recommends it for sub-acute and chronic **Diarrhœa** where there is "frequent painless, watery or mucous discharges." It has a great reputation in *dysentery* associated with the passage of large quantities of blood, and in the so-called hæmorrhoidal dysentery.

EXTERNALLY.—It is used as a sedative to all kinds of wounds and ulcers, and is recommended by Dr. Shoemaker as an application in some forms of skin disease. We use a tincture prepared with ether which we order to be rubbed into varicose veins. It is said to be the best lotion to apply in cases of *extravasation of blood* under the conjunctiva, or when the eyeball is congested from coughing (as in whooping cough).

DOSE.—The reputation of this remedy was made by the use of drop doses of the tincture, and Dr. Sydney Ringer (1880) recommends 1 to 2 minims of the tincture as a sufficient dose. "The B. P. C. unofficial Formulary" fixes the dose as follows—

Ext. Hamm. Liq. ♏ij to v | Tinct. ♏v to ʒj

HIERACIUM GRONOVII (Rattle-snake Plantain).

This is one of a number of plants which possess a popular reputation for the cure of **Snake-bites.** When tested by the medical profession they do not as a rule answer the expectations which have been formed of them. Dr. T. G. Happel, of Trenton (Tenn.) and Dr. Stephenson, of Dyer (Tenn.), have recently reported cases (see "Therap. Gaz.," Aug. 1887) in which the free use of an infusion of this weed appeared to give rapid curative results. The difficulty in these cases is that so many persons bitten recover within twelve or twenty-four hours, whatever treatment is employed. It is the practice to give such remedies in the form of copious draughts of the hot infusion, and of course these by promoting the action of the skin, do something to aid the elimination of the poison, from whatever plant they may be prepared.

HOLARRHENA ANTIDYSENTERICA.

Merck has recently extracted an alkaloid which he has named "Conessine" from the seeds of this tree. This is recommended as a valuable remedy in **Diarrhœa and Dysentery,** diseases in which the bark and seeds have long had a great reputation for curing in India and the East. (New Commercial Plants and Drugs, No. 10).

HYDRASTIS CANADENSIS (Golden Seal).

This is one of the American remedies, the medicinal powers of which appear to have been recognised by the earliest settlers in that country, who learnt its virtues from the Indians. With the eclectic school it has always been regarded as one of the best tonics and

alteratives known. It is somewhat surprising that it has been almost ignored by the writers of the English text books until very recently, although it has a place in both the French and American Pharmacopœiæ.

Prof. Bartholow ("Materia Medica and Therapeutics," 1884), gives a good description of the various diseases in which it has been employed. Dr. Hale in his "New Remedies" (1867,) devoted 43 pages to its consideration. It has come under notice recently as a remedy for **Uterine Hæmorrhage.** Dr. L. Góth reports that he has employed the tincture and fluid extract in various forms of uterine hæmorrhage, especially in disordered menstruation, metrorrhagia, hæmorrhage following abortion, and that occurring at the change of life. The best results were obtained where no organic disease existed, and in the climacteric hæmorrhages. Less satisfactory effects were observed in the menorrhagia of chronic metritis, and no effect at all was produced on hæmorrhage due to erosion of the os uteri or on the secondary hæmorrhage following abortions.

The experiments performed by Fullner in 1885 showed that hydrastis acts upon the vaso-motor nerves, and also slightly stimulates the pneumo-gastric. He found that after injections of the drug the uterine muscles became anæmic, and that all the various preparations of the drug produced uterine contractions. Schatz in 1883 read a paper before the Congress of German Naturalists and Physicians, in which he spoke very highly of this remedy in uterine hæmorrhage, and recorded thirty cases produced by the following causes in which good results followed: bleeding myomata, congestive dysmenorrhœa, bleeding from virginal uterus, hæmorrhage caused by parametric cicatricial tissue, by subinvolution from endometritis and metritis, and at the climacteric.

Successful series of cases have also been recently recorded by Woltering, Akuloff, Mendes de Leon, and Wilcox of New York. The latter in an able contribution respecting this drug to the "New York Journal," Feb. 19, 1887, says that **Metrorrhagia** especially, and menorrhagia have been the determining symptoms for the use of this drug. I would define menorrhagia as a condition of menstruation when the the flow, previously normal, becomes profuse, or has always been profuse, when compared with that of women of the same station and time of life, and is evidently too great a loss for the patient to bear. Although nothing, so far as I know, will conceal its unpleasant taste, yet I have given only the fluid extract, in doses of 20 drops three or four times daily in a wineglass of water, in cases of fibro-myomata, **Subinvolution,** and hæmorrhagic endometritis continuously, in other

cases for ten days before and during the menstrual period. I have never used hydrastine or the other alkaloids, because of the great variations in their strength."

In respect to its use in **Uterine Fibroma** he says: "Hydrastis checks the bleeding from uterine fibro-myomata by the production of persistent anæmia, unaccompanied by the distressing cramps of ergot or the flooding from the alternate contractions and relaxations. So in the cases of small fibroids it is preferable where their expulsion would probably be attended by hæmorrhage or septicæmia. We all know that enucleation by the spoon-saw is frequently followed by death, that removal of the ovaries (castration), or removal of what has been termed, curiously enough, the 'uterine appendages,' is generally unnecessary and contra-indicated, aside from the great danger to life, on both social and moral grounds." In face of the experience of the various observers above enumerated, every man, before resorting to abdominal section, should consider that he may needlessly sacrifice a a human life. He gives also a number of cases showing its value in menorrhagia in obstructive **Dysmenorrhœa**, and he makes in respect to these cases some remarks which are well worthy of the attention of some of our gynæcologists.

"In this flexion of the uterus, producing what has been called obstructive dysmenorrhœa, although the worst cases as regards pain and intractability have been cases with a patent uterine canal, the artificial anæmia has not failed to relieve the cramps, the pains, and generally the nervous symptoms as well. This drug also obviates the necessity of having recourse to the operation of posterior section, which is ordinarily one of the most fatal of all the minor operations. In these cases, if hydrastis is employed, local treatment is entirely unnecessary. I would even go further and say that, in many cases, an examination can be dispensed with. The only interest that the patient has is that her symptoms shall be relieved; that is the only interest that the physician should have, and, if it can be accomplished without an examination, I regard an examination as entirely unnecessary. I am prepared to say even more: that I would have it the established rule that no examination of an unmarried woman should be made unless with the unanimous decision of a consultation, one of the physicians, at least, to be a general practitioner." These words have the greater weight, inasmuch as they come from a gynæcolgist who has hitherto devoted himself entirely to the surgical aspect of his branch of study.

The above quotations are sufficient to show that this drug may be

used in a certain series of troublesome cases with a fair chance of success. But it will be unfortunate if attention being so prominently directed to this part of the therapeutic action of the drug, if its other remedial powers escape notice.

Hydrastis possesses an undoubted power in curing chronic and catarrhal conditions of the mucous membrane. Whether it is **Nasal** or **Post Pharyngeal Catarrh, Otorrhœa** or **Leucorrhœa**, great advantage will be obtained by using local applications of hydrastis, either in the form of lotions, injections, or powders.

In **Chronic Nasal Catarrh** we have for many years employed "a snuff" containing hydrastin gr. xv to Sacch. Alb. ʒj, and a nasal injection of hydrastis Liq. Ext. ʒj, Common Salt, gr. xx, Aquæ ʒiij. It is favourably mentioned by Prof. Batholow for **Chronic Gastric Catarrh,** catarrh of the duodenum (especially when accompanied by catarrh of the gall-ducts and jaundice), and he also recommends it in chronic catarrh of the intestine. Mr. Clifton describes the patient for whom hydrastis is indicated as follows: "He presents a sodden looking face, yellow slimy tongue, he complains of sour or putrid eructations and a combined feeling of distension and empty goneness after meals, all pointing to mucous flux of the stomach."

It is also recommended by Prof. Bartholow for **Constipation**, "when the stools are dry and hard, but torpor of the muscular layer of the intestine is not affected by it." We hesitate to endorse Prof. Bartholow's statement in respect to the drug having no action upon the muscular coat of the intestine. In some of the cases in which we have obtained the best results from it, we considered torpor of the lower portion of the large intestine to be the chief cause of the constipation, and in some of these cases it undoubtedly answered our purpose, after drugs which increase the secretions had failed. It is chiefly in cases which have resisted all other remedies that we have employed it, and not infrequently with success. Dr. Richard Hughes (Pharmacodynamics,) states that a weakened and congestive state of the lower bowel is the indication, and agrees with Dr. Rogerson in considering that it is when constipation is due to sedentary habits and the frequent resort to aperient medicine, that it is useful. Prof. Bartholow speaks of its value in ulceration of the rectum and in fissure of the anus, and recommends its local application in such cases.

Intermittent Fever claims hydrastis among its remedies. This action appears to be due to the hydrochloride of berberin it contains. It is recognised as inferior to quinine, but Professor Bartholow thinks it may prove useful in combination with ferruginous

preparations in **Chronic Malarial Poisoning**; **Chronic Bright's Disease** and **Chronic Catarrh of the Bladder** are also among the complaints in which it has been employed with success.

Professor Bartholow says that in **Gonorrhœa**, after the acute stage has subsided, it is one of the best remedies we can employ, and bears personal testimony to its value, both in this complaint and in **Gleet.** The following is his prescription:

℞ Hydrastinæ ℥j | Mucil Acaciæ ℥iv
Mix. Sig. ℥ss as an injection.

There is another claim made for hydrastis, viz., that it favourably influences the course, and sometimes even cures some forms of **Cancer.** The late Dr Bayes devoted much attention to this question, and gave the following as his final conclusion: "It has nc influence over the cancerous dyscrasia as such, and is of little value in uterine carcinoma, but that in **Scirrhus Tumours** developed in Glandular Structure, as in that of the breast, it is often of great value through a specific influence on the gland itself."

In prescribing hydrastis there is one point which should be remembered. There is an active principle, hydrastine, which was isolated by Durand in 1851, and there is a preparation called hydrastin, which is much used in America, and which has been shown by Mahla in 1862, to be the hydrochloride of berberin, to the presence of which the root owes its yellow colour. It should be also noticed that hydrastin is insoluble in alcohol, ether and chloroform, and that the drug is incompatible both with acids, alkalies, or substance containing tannin. It is better given alone than in combination.

DOSE AND PREPARATION.—The B.P.C. Formulary gives—

Extractum Hydrastis Liquidum (Hydrastis ℥xx gives Oj Extract).
DOSE ♏v to xxx.

Tinctura Hydrastis (Hydrastis ℥ij gives Oj Tincture),
DOSE ♏v to ℥j.

The Extra-Pharmacopœia gives—

Hydrastina (active principle) gr. ½ to v in pill | "Hydrastin" (eclectic preparation) gr. ij to vi.
Hydrastinæ Hydrochloras gr. ½ to vj

We use Pulv. Radicis, Sacch. Alb. equal parts, gr. j to v stirred in water or used to make an extemporary infusion. This preparation is always reliable.

HYDROCHINON.

From the researches of Professor Silvestrini and Dr. Picchini it appears that hydrochinon is a powerful *antipyretic*, harmless even in large doses, prompt in action, especially if the morbid temperature is high, and when given at the moment in which the temperature tends

naturally to descend. Its action varies in different fevers; in **Typhoid**, **Rheumatism** and **Erysipelas** its effect is most marked; in pneumonia and tuberculosis it is less efficacious; and in malaria it seems to have scarcely any *antipyretic* action. Hydrochinon is not simply an antithermic; it affects the pulse and respiration, the elimination of urea, diaphoresis and arterial pressure. The effect is equal on the central and peripheral temperatures; perhaps on the last it is more pronounced. It is best given in doses of 30 to 50 centigrammes hourly, especially when the temperature tends to descend. Gastro-enteric disturbances are not aggravated by it. It has an energetic antifermentative and antidiarrhœal action. It is quickly eliminated by the urine. In healthy animals, *small* doses produce *fall* of temperature and increased dispersion; *large* doses cause *rise* of temperature, tremors, and convulsions. It probably acts directly on the central nervous system. A 5 per cent. solution does not cause local irritation when given hypodermically.

HYOSCINE.

There are three salts of hyoscine known to commerce, the hydriodate, the hydrochlorate and the hydrobromate. They have been used (especially the latter) for controlling cerebral excitement, and especially in cases of mania and delirium. They appear to exercise the same properties as the drug (Hyoscyamus). Mr. Tweedy has lately ("Lancet," Dec. 4th, 1886) investigated the action of the last named salt as a *mydriatic*. He uses a solution of the strength of 1—200, and concludes that "if hyoscine is to have a place in ophthalmic therapeutics, it will be chiefly in cases of **Iritis**, and in other conditions where it is desirable to produce as much dilatation of the pupil as possible, and for as long a time as possible. It is worthy of note that the application of hyoscine to the eye does not seem to cause the unpleasant taste and feeling in the throat which often follows the use of atropine. This circumstance accords with the observations of Dr. Bruce and others, that when given internally it does not produce unpleasant dryness of the throat and skin like atropine."

HYPNONE.

Drs. Hurt and Moebs, of Breslau, have instituted exhaustive experiments with this drug, and gave it in doses as large as 7 grains. They report ("Breslauer Artzliche Zeitschrift"), as follows: "The results obtained with hypnone were in every instance positively illusory, and the drug ought to attract no more attention from the profession.

ICHTHYOL.

Discovered by Schröter, and introduced by Unna, of Hamburg, in 1882, this drug bids fair to become a very valuable therapeutic agent. It is distilled from a bituminous shale, found in the Tyrol, and full of semi-fossilised remains of various fishes. It is a transparent oil, of yellow-brown colour, and sea-green fluorescence; sp. gr. 0·865. Its constitution is complicated: the elementary analysis (Baumann and Schotten) giving as its components, carbon, 77·25; hydrogen, 10·52; sulphur, 10·72; nitrogen, 1·10. When treated with concentrated sulphuric acid an ichthyol-sulpho-acid is produced, soluble in water. This acid and its sodium, potassium and ammonium salts, which are also soluble in water, are those employed. The ammonium ichthyol sulphonate is thinner than the other two, and only contains three-quarters of their quantity of the acid. Like the acid, all three are treacle-like fluids, completely soluble in water. Its curative properties have been recently reported upon by Unna—"Monatsh für Prakt Derm," translated "Journ. Cutaneous and Venereal Diseases," vol. iv., No. 9; Zeister, "Chicago Med. Journ.," Dec. 1885; Elliot, "Medical Record," March 19, 1886; Brookes, "Medical Chronicle," Jan. 1887; Schweninger, "Chanté-Annaler," Jan. 11, 1886, etc.

Unna has recently given the following directions for its use:

Internally ichthyol is indicated: (1.) In **Skin Diseases**—acne rosacea; nervous forms of eczema in persons of nervous constitution; eczema from teething; lichen urticatus; erythema multiforme; dermatitis herpetiformis; furunculosis—but it is not indicated in psoriasis; (2.) In the following other diseases (I speak after five years' experience) in acute and **Chronic Rheumatism**; **Bronchial Asthma**; **Chronic Catarrh** of the stomach and intestine, together with catarrh of the bile-duct (icterus); **Chlorosis**; **Tuberculosis** (especially in children) and **Scrofula**; vascular engorgements of all kinds.

In respect to the action of ichthyol, it would appear from some recent experiments of Professor Zuebzer, of Berlin, that this substance acts as a tonic, by preventing organic waste. It will be remembered that it is very rich in sulphur, containing 1·5 per cent. and it would appear that a certain proportion of this sulphurous and azotic matter is retained in the system, and the Professor considers that this indicates an increase of albuminoids into the constitution of which these compounds enter. He gave the salts of ichthyol (ammonium and natrium sulpho-ichthyolicum) either in gelatinous capsules or in pills: of these, every two hours one or two capsules, each containing 4 to 8 grains, or three or four pills of 2½ to 4 grains. The thirty

patients who regularly continued the use of these preparations, were suffering from **Vesical Catarrhs**, from **Blennorrhœa**, and **Chronic Spermatorrhœa**, from **Pyelonephritis**, from **Nephritis**, and from **Diabetes Mellitus**. Already a few days after the commencement of the treatment, the patients, who generally were very feeble and extremely emaciated, felt stronger and more cheerful. The weight of the body increased progressively and constantly from week to week. This increase varies from 6-16 pounds within two months.

The "Wiener Medicinische Blätter," (August 5, 1881) gives two cases of **Chronic Urticaria**, in which the internal administration of 5-drop doses of ichthyol (pure), and applied also externally, caused a rapid cure which was permanent. (Unna considers that salicylate of soda and atropine are specific remedies)

Dr. Dubelir has tried this drug both externally and internally in rheumatic cases at the Moscow military hospital. He found it relieved the pain, but not the swelling. The external application is likely to *cause a skin eruption*, unless the parts are frequently washed.

Schmidt reports a case of **Lipoma**, cured by inunction of ichthyo-sulphate of ammonium (50 per cent. solution), after previous washing with tepid soap-water. Steady diminution in the size of the tumour took place on the ninth day, when an ulcer formed, and the contents were removed by puncture with a knife. The whole of the lipoma was then got rid of, only a slight scar remaining.

Schweninger and others have claimed for it great anodyne properties in **Rheumatism, Gout, Neuralgia** and **Migraine**, 10 to 50 per cent. solution being employed. Unna ("B. M. J.," April, 9, 1887), also claims it as a useful remedy in **Catarrh of the Stomach and Intestines** and **Vascular Engorgements.**

Dr. Brookes considers that pills or capsules form the only method of employing it internally, on account of its nauseous taste. The dose for children is from 2 to 5 drops, and 5 to 10 drops of the ammonia sulphate of ichthyol.

IODIDE OF SODIUM.

Iodide of Sodium is, says the "Prov. Med. Journal," March 1, 1887, considered by Dr. Richardson as a valuable substitute for, or adjunct to, iodide of potassium. In chronic **Eczema** and painful **Rheumatic Affections** it often answers well when iodide of potassium does not agree with the digestion. Combined with arsenic it is useful in **Lepra** and **Psoriasis.** Externally applied, in cases of indolent **Ulcer**, chronic **Syphilitic Sores**, and offensive discharges from the nostrils,

it acts as a good antiseptic. The following is given as a useful formula for the purpose :

℞ Sodium Iodide	ʒss	Rectified Spirit	ʒij
Tincture of Myrrh	ʒj	Distilled Water	ʒvj

To make a solution of 8 ounces.

Used in the form of fine spray from Seigel's steam spray-inhaler, Dr. Richardson found it of the greatest service in a case of syphilitic ulceration of the fauces.

IODIDE OF POTASSIUM.

Dr. Mackenzie Booth, of Aberdeen, records ("Lancet," May 14, 1887), a case of persistent **Priapism,** which all remedies failed to relieve, until iodide of potassium was given in doses of 5 grains four times daily. He regarded the priapism as being due to local inflammation about the muscles constricting the bulb of the penis.

IODOFORM.

The "Medical Press and Circular" in a recent article, says: "The iodoform craze is coming rapidly to an end, and those who have ridden the hobby so vigorously have descended, rather ashamed to have been seen at it. The imputation that iodoform in some cases produces toxic effects when used as a dressing for wounds has been followed by a denial that it possesses antiseptic properties. Messrs. Heyn and Rovsing, of Copenhagen, report that in order to test its germicidal reputation they prepared solutions of iodoform in olive oil and serum, and studied their effects upon various bacterial organisms; they also experimented on rabbits by mixing inoculation fluids with iodoform. Their experience was that in no case did the presence of the iodoform interfere with the development of micro-organisms, so that they conclude that as an antiseptic its employment in surgery is useless. Further, they point out that if this conclusion be correct, iodoform might itself act as a carrier of pathogenic germs; and they therefore recommend that before using iodoform, which is valuable as a dressing on other grounds than as an antiseptic, it should be disinfected in sublimate solution. *Quis custodiet ipsis custodes!*"

The attack upon iodoform has caused some very angry correspondence in the "Wiener Med. Wochenschrift" and the "Fortschritte der Medicin" into the merits of which it is unnecessary to enter. There are a large number of antiseptics, and iodoform smells worst of them all. Its value is questioned. *Verbum Sap.*

IODOL.

This is a crystalline powder of a yellowish brown colour, it is tetra-iod-pyrrol, having the formula $C_4 I_4 NH$. It is soluble in three parts

of absolute alcohol, and in ether, but almost insoluble in water (1-5000). It requires to be kept in dark-coloured bottles, and in a cool place. It is supposed to resemble iodoform in its properties, (which at present is not a high recommendation) but it is free from the unpleasant odour and unpleasant after effects. It contains 889 parts per 1000 by weight of iodine which it readily liberates. It is absorbed from wounds into the blood, Rich found it in the urine and saliva after it had been packed into the cavities of buboes, and in this case symptoms of iodism were produced.

The experiments made by Pahl at the Pharmacological Institute at Berlin, in respect to its internal effects when given to animals, showed that it caused emaciation, and that they ultimately perished through general weakness. Fatty degeneration, generally, of the liver and kidneys was invariably produced. This is what we might expect from large doses of iodine.

It is unnecessary to enumerate the various diseases in which it has been employed, they include all those surgical conditions for which iodoform has been so much used; as a local application it practically serves the same purpose as a solution of iodine.

Dr. Wolfenden in the "Practitioner," (p. 336, 1887), gives the following list of the preparations which he employs.

(1) *Powder of Iodol.*—The pure powder may be used. There is no need to mix it with starch or sugar, &c., since, being fine, it is readily dusted over a raw surface, or insufflated into the throat. Possessing no toxic power, it is of more importance to cover the diseased surface than to measure the dose. For all laryngeal, pharyngeal, and most nasal and oral conditions this is, perhaps, the most generally useful application.

(2) *A Solution in Alcohol and Glycerine.*—This was Mazzoni's original application: iodol, 1 part; alcohol, 16 parts; glycerine, 34 parts. This forms a good application by means of the brush, or may be used as a very coarse spray.

(3) *Iodol, 1 drachm; Ether, 1 ounce.*—This forms a clear brown solution, useful for application either by the spray or brush. The ether quickly evaporating leaves the powder *in situ*. It is useful for naso-pharyngeal atrophic conditions.

(4) *Iodol, 1 drachm; Glycerine, 1 drachm; Vaseline, 7 drachms.*—This is a modification of one of Rumbold's sprays. It is a very soothing application for pharyngeal conditions. It requires to be warmed before using.

(5) *Iodol Pastilles.*—Iodol, 1 grain; glycerine, 1 minim; glyco-

gelatine, 18 grains. These are very useful for chronic pharyngeal conditions, and are much preferable to iodoform pastilles.

(6) *Iodol Bougies*, containing ½ a grain iodol in each. These are made for me, for use in diseased nasal conditions.

(7) *Iodol Wool*, 10 per cent., for tampons, &c.

(8) *Iodol Gauze*, for dressings.

JÁMBÚL SEEDS.

The seeds are the product of *Eugenia Jambolana*, and must not be confounded with "jumble beads" or jequirity seeds, an infusion of which was introduced a few years ago as an application for granular lids.

I lately tried, writes Dr. G. C. Kingsbury, ("Lancet,") powdered jámbúl seeds in a case of **Diabetes** in which the patient had been ill for over six months, was greatly emaciated, and quite prostrate. He was suffering from great thirst and ravenous appetite; there was also great restlessness. The urine had a specific gravity of 1·040 to 1·042, and from 7 to 7½ quarts were passed in the twenty-four hours. Five grains were given six times in the twenty-four hours for a fortnight. At the end of that period, the patient was able to get up, and walk out for an hour at a time, was neither thirsty, nor abnormally hungry, and was passing 4 to 5 quarts of urine of a specific gravity of 1·020; he could sleep well, and felt strong. During the time he was taking the jámbúl his diet was not restricted in any way. Dr. E. Hurry Fenwick has also recorded some very successful cases of **Diabetes Mellitus** treated with this remedy.

Dr. Kingsbury mentions that this remedy was recommended by Mr. Banatuda in the "Medical Record," 1883.

JEQUIRITY.

MM. Heckel and Schlagdenhauffen arrive at the following conclusions as to the nature of true and false jequirity (a full account of their researches is published in "Der Fortschritt," Nos. 3 and 4):—That false jequirity, *Adenanthera pavonina*, does not contain the phlogogenic principle; that the latter exists neither in the peeled seed, nor in the alkaloid, nor in the glucoside; that the testa contains a yellow colouring matter, soluble in water, but which can only be discovered after maceration of the previously bruised seeds; that true jequirity contains—besides the jequiritine discovered by Bruylants and Vennemann—a neutral principle, abrine, distinct from gallic acid and the two colouring matters; that the chemical composition of the true and the false is completely dissimilar, although the two seeds are closely allied botanically; that the bacillary elements furnished by the

maceration of either seed are absolutely identical; that the true jequirity only possesses the power of inducing inflammation, which must be dependent on the chemical composition; that the seed of false jequirity, being clearly distinguishable both by its external configuration and internal structure, ought not to be substituted for the true jequirity. ("Lancet.")

KAVA-KAVA.

This drug is imported from the Polynesian Islands. It contains a neutral crystalline principle, kavalin. An infusion is prepared from the root, in which the active principle resides. Professor Gabler, who has examined the therapeutics and chemistry of the plant, considers that the medicinal virtues of kava are due to a very aromatic oleoresin which it contains, as well as to kavalin, the so-called active principle. Its flavour is not unpleasant, and it appears likely to be useful in those chronic **Catarrhal Conditions** of the **Kidneys** and **Genital Organs** for which copaiba and sandal-wood are now employed. It is also said to be a powerful diuretic. In France it is given in the form of pilules of which 8 to 15 are given in the day.

KEPHIR (Kefir, or Milk-wine).

Dr. Rogelmann gives the following recipe for making this beverage ("Deut. Med. Zeit.") One volume of buttermilk is to be mixed with one to two volumes of sweet milk, poured in a bottle, and allowed to stand. In three hours active fermentation will set in, which in about three days will be at an end. The product is a fluid smelling like wine, and containing alcohol, carbonic acid, lactic acid, and casein. The following precautions are to be observed in this in every way simple and inexpensive procedure. The sweet milk used ought not to be wholly freed from the cream, and the bottles ought to be of a size that the milk fills only two-thirds of them. The fermenting milk is to be shaken daily vigorously (about three or four times), during which manipulation a cork is to be placed firmly in the bottle, but removed after the shaking in order to allow the carbonic acid to escape. The opened bottle is to be placed in a horizontal position at least twice daily for a period of ten minutes, in order to let fresh air take the place of carbonic acid, and to thus prevent the stoppage of fermentation. If a very effervescent liquid be desired, the bottles are toward the close of the fermentation process allowed to stand continuously in a perpendicular position. In order to obtain new quantities of this "milk-wine," we add to a certain quantity of sweet milk one-fifth its volume of milk thus fermented, and are so able to continue this

production *ad libitum*. The most favourable temperature for the preparation of this milk-wine is 15° C."

The "Verhandlungen der Med. Gen. zu Würzburg," 1886, 4. xix., gives the following summary of observations made during the administration of kephir to patients suffering from **Diarrhœa, Anæmia, Tuberculosis,** and other exhausting diseases.

(1) Kephir increases the urinary secretion appreciably only when used in large quantities.

(2) The specific gravity of the urine and the total weight of the solids in the urine sink under the influence of kephir.

(3) The nitrogenous tissue-changes are checked.

(4) Digestive energy and nutrition in general are invariably raised even in the most exhausted individual.

(5) The bodily weight increased materially.

(6) The number of the red blood-corpuscles increases.

(7) The pains of lung and stomach affections subside in a few days.

(8) The sleep becomes more quiet and more refreshing.

(9) The body becames rounder and fuller.

(10) The pallor of the face yields to a fresh and red colour.

(11) Hence we must regard kephir as one of the most effective of all means to recover the physical powers after a long or exhausting affection.

KOLA NUT.

This substance, to which we have frequently called attention in previous issues, is again brought to the front by Dr. N. Hudson ("Med. Times," June 26th, 1886), who states that it gave great benefit in a case of intermittent and irregular heart, with faintness and dyspnœa; the patient suffering from rheumatic endocarditis. He gave 150 grs. of kola paste taken once or twice a day, and the patient's symptoms were all benefitted. We have never been able to trace any effects from the substance other than those of the caffeine which it contains so largely. In this case caffeine had been given and failed; but it is questionable whether the caffeine was an active preparation, as many of those sold possess none of its properties. Kola-chocolate is an excellent form of administering this drug.

KOUMISS.

"The Medical Chronicle" (June, 1886), gives the following recipe for manufacturing koumiss.—A pint of buttermilk or a bottle of koumiss is added to a gallon of new milk in a basin. This is stirred steadily round in one direction for a quarter-of-an-hour, and covered up for twelve hours, when it is again stirred in the same direction for another

quarter-of-an-hour. It then stands for twelve hours more, covered up from dust, when it is put in champagne bottles, and the corks tied down. After a few days it can be used, being well shaken before opening, and care being exercised in opening the bottles. (See also Kephir.)

LACHNANTHES TINCTORIA (Red-root, Spirit Weed).

This plant is described and figured by Mr. Christy (New Commercial Plants and Drugs, No. x.) A tincture made from the whole plant has a great reputation among some American practitioners as a remedy for **Pneumonia, Nervous** and **Typhus Fevers, Hoarseness, Laryngeal Cough** and **Phthisis.** It has been used in this country chiefly in the latter class of cases. It has been extensively employed by Dr. Nankivell, of Bournemouth, who has reported excellent results in some cases of **Phthisis** "in the second and third stages, even when the amount of lung destruction has been considerable, but when the destructive process is for the time averted, and the evening temperature is not over 100⅘° Fah., or thereabouts." We have used it frequently without very decided results. There appears to be a difficulty in obtaining a reliable preparation. It is given in doses of ♏v. to xv. of the tincture.

LAMIUM ALBUM (White Nettle). See Urtica Urens.

LANOLIN.

The properties of this substance were fully considered in our last issue, ("Medical Annual," 1887, p. 353). Koebner ("Berl. Klin. Woch," No. 5, 1886), finds that certain medicinal substances are less soluble in lanolin than in the vehicles hitherto used; for example, chrysarobin, which in warm fat is almost completely soluble, and in vaseline to the extent of 60 per cent., is scarcely at all soluble in lanolin. He therefore advises the addition of 10 to 20 per cent. of fat.

Mr. Rohart, speaking of lanolin as "Suint" (Brit. and Colonial Druggist), calls attention to its great affinity for sulphur. It can absorb 110 times its own bulk of sulphuretted hydrogen. This sulphurised "suint" saponifies with great facility, even in the cold. Considering the penetrative properties of lanolin and the value of sulphur in many cutaneous affections, these facts are of some medical interest. It is already asserted that cases of sycosis that have proved refractory to other remedies have been greatly benefitted by the sulphurised lanolin.

LANTANINE.

Lantanine is an alkaloid discovered by M. Negrete and extracted from *yerba sagrata* of the family of verbenas. M. Buiza has observed

that, like quinine, this alkaloid had some action on the circulation. It slows the nutrition, and at the same time lowers the temperature. The most delicate stomachs tolerate lantanine. Intermittent fevers that prove refractory to quinine have yielded to the influence of (30 grs.) lantanine. In order to produce antipyretic effects in febrile conditions the dose employed is from 15 to 30 grains in twenty-four hours, given in pills of 7½ grs. In **Intermittent Fevers** the drug is administered immediately after the paroxysm. Ninety-five times out of a hundred a further paroxysm will not appear. The tincture of lantana cannot be employed owing to its intense bitterness, which cannot be masked by syrup or wine.

LEUCANTHEMUM VULGARE (Field Daisy).

In the "Boston Medical and Surgical Journal" for March 10th, 1887, Dr. James S. Howe calls attention to the fact that this plant is capable of producing in certain persons a marked inflammation of the skin closely similar to that produced by rhus, dogwood, and sumach, and he thinks it is possible that many cases which have been attributed to these latter plants may perhaps have been produced by the field daisy. He reports four cases, himself among the number, in which severe dermatitis was produced.

LOBELINE.

This is the alkaloid of lobelia inflata, it is liquid, brownish red in colour, with an odour like tobacco. The salts are crystalline and freely soluble.

Prof. Bartholow has recently performed some experiments with a solution of the hydrobromate ("Drugs and Medicines of North America"), from them we gather that *small* doses stimulate the reflex centres, the corneal and cutaneous reflex being considerably exaggerated; *large* doses paralyze them, beginning with the periphery and advancing to the centre, the muscles, however, retaining their contractility.

The pneumogastric is stimulated by *small* doses and the heart's action is slowed, large doses paralyze the nerves and cause quickened and excited action of the heart. It does not paralyze the heart muscle, and death is due to respiratory failure.

It appears to have no effect upon the sensory nerves, and consciousness is preserved until carbonic acid narcosis takes place from failure of respiration.

These experiences serve to explain the action of lobelia when given in cases of asthma. Bartholow gave lobeline in cases of **Cardiac Asthma** and **Angina Pectoris** and found it useful, he considers that

the alkaloid will prove superior to the crude drug in purely **Neurotic Asthma.**

It is probable that it will prove useful in **Epilepsy** and **Chorea.**

DOSE.—Lobeline $\frac{1}{100}$ gr. to $\frac{1}{20}$ gr.

LYCOPODIUM CLAVATUM (Club Moss).

In a recent clinical lecture delivered at St. Peter's Hospital (July 13th, 1887), Dr. E. Hurry Fenwick stated that for "Enuresis, whether suddenly developed as the result of accident or operation, or in other cases where the incontinence of urine had been of several years' standing, he was acquainted with no drug which gave such entirely satisfactory results as the tincture of white lycopodium. He had first given it to check the nocturnal enuresis of children, but finding it so surprisingly successful, he next employed it for adults, with the result that micturition was quickly reduced from six or eight times an hour to once in two hours. He regretted the drug was so expensive at present; next in efficacy to the tincture he placed the white preparation in the form of powder, but warned his hearers that the yellow or brownish-yellow kinds of lycopodium in the market were for this purpose, practically useless and inert." ("Monthly Mag. of Pharmacy.")

We have been unable to ascertain from Dr. Fenwick the nature of the "tincture," or the "white preparation" employed by him.

The spores of the club-moss are absolutely insoluble in water or spirit. Mr. Isaac Thompson some years ago submitted them to microscopical examination, and found that the spores consisted of bodies $\frac{1}{800}$ inch in diameter, shaped like a nut; by pounding them in an agate mortar for some time, the outer surface of "the nut" was fractured, and the contents, consisting of an oleaginous matter were liberated. The medicinal virtues appear to reside in this oleaginous matter, and use has been made of this knowledge to convert these spores into an active medicinal preparation, by triturating the spores with sugar of milk. This is probably the "white preparation" mentioned by Dr. Fenwick. Experiments have also shown that the "shell of the nut" is rendered soluble by prolonged maceration in ether, and in this way an active tincture of lycopodium is prepared. Lycopodium is also of great value as a remedy in those cases of **Dyspepsia** which are accompanied by an excess of lithates in the urine, with gastric and intestinal catarrh with flatulent distension of the transverse column.

DOSE.—Ethereal tincture of Lycopodium, 5 drops every 3 hours.

MELON ROOT.

The emetic principle of melon root has been extracted by Sorosiewicz, by treating the aqueous extract with alcohol. This he has named "melon-emetine," and states that it may be used in doses of nine centigrammes to produce vomiting.

MENTHOL.

Langaard has recently contributed a valuable article respecting this drug in the "Therapeutische Monatshefte" (March, 1887).

It is the stearoptene of the ethereal oil of of peppermint. Its formula is $C_{10}H_{20}O$, its chemical composition is unknown, but it is believed to belong to the secondary alcohols. It is freely soluble in spirit, ether, or chloroform, and also in oil, glycerine, and fats.

Langaard states, that "the quantity of menthol contained in German and English samples is so small that the preparations have little value. American, and above all Chinese and Japanese, samples are most rich in menthol. The two last furnish often pure menthol, containing but little oil, crystalline at ordinary temperatures, and were formerly known to chemists as *oleum menthol Japonicum crystallisatum.* The therapeutic properties do not appear to be limited by its analgesic effects when used externally, or by its antispasmodic properties when given internally. It also possesses *antiseptic* properties;" but Langaard's experiments in the treatment of wounds were unsatisfactory owing to the large quantity of fluid necessary to dissolve the menthol and the inconvenience of using only solutions. But Cutter found excellent results from menthol inhalations in **Epidemic Influenza.** Salisbury reports the cure of a case of **Diphtheria** by using hourly doses of $\frac{9}{10}$ grain, and probably inhalation of the same drug will prove useful in this disease. It has been used in **Phthisis** by Rosenberg. Koch found that oil of peppermint destroyed **Cholera** bacilli in solutions of 1-2000; and it is recommended in cholera on account of its antiseptic powers, and its influence in checking colic and emesis. The first careful observations respecting the more remote effects of menthol ("Therapeutic Gazette") were made by Pellacani. He found it to be a paralyzant of the cerebral-spinal nervous system, obtunding, and in large doses destroying, sensation and reflex sensibility, increasing the respiratory rate and lessening the depth of the respirations.

Menthol stimulates the heart muscle; it does not affect the frequency of the pulse, but, like camphor, it produces periodic increase in arterial tension.

It is indicated as an antispasmodic, to lessen reflex irritability and as a sedative.

We know little regarding the influence of menthol upon the secretions. Schmitz asserts that it stimulates the secretory nerves, and is therefore indicated in stomach and intestinal troubles with deranged digestion; in chronic pulmonary catarrh with tenacious secretions and scanty sputa.

Delioux de Savignac, whose observations were made with oil of peppermint, reports a diminution in the secretions of the mucous membranes, but an increase in perspiration and secretion of urine: a portion of the menthol taken is eliminated by the kidneys as menthol-glykuric acid.

Regarding the influence of menthol upon the temperature we know nothing; according to Markuson, inhalations of oil of peppermint produce a fall of temperature. For internal use of menthol the pill form should be chosen, as follows:

℞	Mentholi, gr. xxx;	Gummi acac., āā gr. xv;
	Sacchar. albi,	Aq. dest., q.s.
	M. ft. pil. No. xx.	Obduc. gelatina.

To make a pill which shall retain the properties of the drug, the menthol should be mixed with sugar, moistened with spirit, and the mass thoroughly rubbed until the alcohol has evaporated. The gum may then be added, and after, by thorough rubbing, a homogeneous mass has been made, it may be made into pills on the addition of a little water; a few drops only are commonly needed. Each pill contains one and one-half grains. In this form large quantities of the drug may be given without burdening the patient.

METHYL—Chloride of.

At a recent meeting of the Société Medicale des Hôpitaux, ("Lond. Med. Record"), M. Debove made some remarks on the use of chloride of methyl in **Neuralgia**. Since his last communication to the Society in 1884, M. Debove has treated 150 cases of **Sciatica** with this medicine, and found only one case in twenty that was not amenable to its action. **Lumbago** and neuralgia are cured by chloride of methyl almost instantaneonsly; in case of relapse, the pain easily gives way under its influence. Erythema should never be produced in the treatment, the action should be rather superficial, and the greatest number of nerve branches possible should be excited. Great precaution should be taken with patients affected with diabetes and albuminuria, and also with patients whose skin is very irritable. Out of eighteen cases of facial neuralgia, sixteen were cured in this way. The medicament may be sprayed on to the face without inconvenience.

METHYLAL.

Methylal is made by distilling methylic alcohol with sulphuric acid in the presence of peroxide of manganese, but it requires several redistillations before it can be obtained in the pure state, for which reason it is at present a very expensive compound.

In its pure state it is nearly tasteless, but "bites the tongue," its vapour is non-irritating and has a fragrant odour. It is soluble in alcohol, water, and ether. Discovered by M. Malaguti, in 1839. It was introduced by Dr. B. W. Richardson, who in his early researches supposed that he had found that it was a marked narcotic, but he now states ("The Pharmaceutical Journal and Transactions," February 19th, 1887), that he believes that the narcotism so produced was due to the presence of acetone from the methylal not having been sufficiently pure. Recently, with a perfectly pure specimen, he endeavoured to anæsthetize two dogs with methylal in order to enable them to be operated on painlessly. After half-an-hour's inhalation of the vapour narcotism was not produced. The fluid was then injected hypodermically in one animal and to the extent of an ounce dose, upon which a gentle sleep or rather intoxication followed, but with no sufficient anæsthesia to allow painless operating.

In action as a medicine, writes the Editor, ("Therapeutic Gazette,") methylal lies between alcohol and anhydrous ether. It quickens the action of the heart with reduction of the arterial pressure; it makes the respirations slow and deep; it induces a tendency to sleep; and it is a sedative to pain, but not to a very deep degree. On the whole, it would be best to keep it in the group of anodyne antispasmodics, in which Dr. Richardson originally put it. It causes very little muscular excitement and no vomiting, but after long inhalation of its vapour it produces a free flow of saliva.

Experiments in respect to the action of this drug have been performed by Mairel and Combemale, Personali, M. Motkrotchin, Eloy, Amrep, Nicot and others. The experiments of the first-named authors, show that it has a hypnotic effect when injected hypodermically, but such injections tend to produce ulceration at the site of injection; and the somnolence is followed by a state of profound depression which lasts several days. Given by inhalation it produces great irritation of the ocular, nasal, and bronchial mucous membranes. Tolerance of the drug is very quickly established. Personali considers that it may prove valuable as an antidote to strychnine.

We think none of the experiments warrant its internal employment, although it has been proposed to use it in cases of **Angina Pectoris, Asthma** and **Colic.**

M. Nicot offers the following suggestion for its external application as an anodyne: Oil of sweet almonds 85 grains, methylal 15 grains. To make a liniment: of alcohol 110 grains, methylal, 10 grains, lavender essence, 5 grains. An ointment may be made by adding 5 grains of methylal to 33 grains of some fatty excipient. Or an odontalgic mixture, for application to inflamed nerve pulp, by adding 2 grains of methylal to 8 grains of balsam. For internal administration it may be mixed with syrup and given in doses of a drachm.

MICHELIA NILIGERICA.

This is a plant indigenous to Ceylon. An infusion of the leaves is said to be valuable in **Intermittent** and malarial **Fevers**, in fact it is said to exceed in its febrifuge properties the salts of quinine. We have very little knowledge respecting it, and cannot state the dose in which it should be employed.

MORRHUOL.

Under this name M. P. Chapoteaut (8, Rue Vivienne, Paris), has prepared what purports to be the active principle of cod liver oil. This is put up into capsules, the contents of each being stated to contain 25 times its weight of the crude oil. Prof. Germain Sée and Dr. Labadie-Lagrave say that it is readily absorbed and well tolerated.

MYRTOL.

Myrtol is obtained from the distillation of the leaves of the myrtle; it is a liquid possessing the characteristic perfume of the plant. It is of less density than water, evaporates at the ordinary temperature, stains paper, but the stains disappear entirely. It has a warm, slightly acrid taste, soon followed by a sensation of freshness. It is said to be an excellent disinfectant and an energetic antiseptic, to stimulate the digestive functions, and to increase the appetite. In moderate doses myrtol acts as a sedative to the nervous system. It is eliminated by the respiratory and urinary passages. Myrtol appears to have the advantage over the balsams of not upsetting the stomach, thereby enabling it to be employed for a long time without leading to objectionable effects—*e.g.*, dyspepsia. M. Linaris has had globules of myrtol prepared, each containing 15 centigrammes of the pure liquid. The remedy does not appear to cause the same effects at all periods of diseases of the respiratory passages. In order to obtain the best results it should be employed with a view to combating subacute or chronic catarrhal affections, or it may be given at the termination of an acute attack of bronchitis when the fever has subsided. Another indication for its employment is an abundant opaque muco-purulent secretion. In these cases the secretion is diminished

and rendered less purulent. M. Linaris has employed myrtol in **Chronic Fetid Bronchitis, Catarrhal Bronchitis, Catarrhal Asthma** with paroxysmal attacks and palpitations, capillary bronchitis, and dilated bronchi. The average daily dose was six of the globules; they should be taken after meals: two in the morning, two in the daytime, and two at eventide. ("Lancet," March 26th, 1887.)

NAJA TRIPUDIANS.

This is the venom of the Indian Cobra. Wolfenden ("Journ. of Physiology") has recently conducted some elaborate investigations in respect to the nature of the poison, and determined the following points: 1. Its toxicity is not due to any bacillus, bacterium, or living organism. 2. it is not due to any alkaloid, such as the hypothetical "cobric acid." 3. It is wholly due to the proteid constituents of the venom. 4. These proteid constituents are: (*a*) Globulin, which is always present and probably kills by interference with the respiratory mechanism (asphyxia), and without paralysis—causing local inflammation, but not of great intensity, compared with daboia. (*b*) an albumin resembling acid albumin, which is precipitated along with globulin by saturation, and which is in some degree dialysable. This proteid probably acts on the respiratory apparatus chiefly, like globulin, but less intensely. (*c*) An albumin which is precipitated by Na_2SO_4 out of the magnesic filtrate, and which is serum albumin. This is also toxic, and produces a kind of ascending paralysis with fatal termination, by suppression of the respiratory function probably from paralysis of the muscles concerned in respiration. (*d*) Traces, in some specimens, of hemialbumose, and questionable traces of peptone. The author regards these as accidental, and probably due to the length of time the poison had been kept.

We have recently made some experiments in respect to the therapeutic application of this venom. We find that its properties can be preserved almost indefinitely when attenuated by glycerine and spirits of wine; and that its physiological effects can be produced when given by the mouth, and that like all the serpent venoms it has a remarkable effect in slowing the pulsations of the heart. We believe that further experiments will show it to be of the highest value in relieving **Nervous Palpitation**. There are cases of valvular disease of the heart, where digitalis and strophanthus fail in checking the rapidity of the pulsations; and it will be noticed in such cases that in spite of the excited action of the heart there is absence of those conditions which accompany failure of compensation such as dropsy and dyspnœa. It will further be found that mental disturbance is even a greater cause

of cardiac excitement than physical exertion. In such cases the ordinary heart tonics are not required, and sedative remedies are of little use. It is just in such cases that we have found attenuated cobra venom, cautiously administered, of the highest value.

Dose.—Tinct. (1 to 1000) 5 drops every 3 hours.

NAPTHALIN.

Some recent experiments of M. Charren show that napthalin can produce cataract. The drug was administered to five animals, in two of which cataract appeared in from three to twenty days. The animals received a dose equal to one gramme for each kilogramme of their weight.

NICKEL—Bromide of.

Is prepared by saturating carbonate of nickel with hot hydrobromic acid, filtering and evaporating to dryness in a water-bath.

It has been used by Dr. Costa in cases of epilepsy. He gives the following formula: *Pills*—Bromide of nickel, 60 centigrammes; powdered marsh-mallow, 40 centigrammes; extract of gentian, 40 centigrammes. For twelve pills. *Syrup*—Bromide of nickel, 10 grammes; water, 120 grammes; glycerine, 15 grammes; sugar, 250 grammes.

NITRO-GLYCERINE (Glonoin).

Dr. L. V. Holst, in a recent paper, considers that this drug is of especial value in **Heart Disease** where there is no serious organic change, but a debilitated condition of the organ. He finds that the dropsy due to this condition is relieved by the administration of this drug, while that of renal disease is uninfluenced by it.

Dr. Trursewitsch, another Russian physician ("St. Petersburger Med. Woch."), gives the following indication for its employment:—The smaller the radial artery is, the more rapidly it dilates under the action of the drug, and the less the secondary effects proceed; on the other hand, the fuller the pulse with a distended radial artery, the less it is affected; and, finally, the softer the artery with a weak pulse, the greater the secondary, and the less the general effects. Single-drop doses of the one per cent. solution are sufficient in cases of small pulse, but with a full pulse it will be found that the full effects cannot be produced with less than two-drop doses. When there is a soft artery with a weak pulse, subnormal doses only should be given,—a quarter to half a drop.

After the trial dose is given, the patient's sensations of pulsation and pain in the head, as well as the distention of the radial artery under the finger of the physician, will be the guides for increasing the

dose. The author finds that the best modes of administering nitro-glycerine are the simple dropping of the solution on the tongue, and by means of tablets; much less satisfactory results were obtained when given mixed with water.

The following are the conditions in which nitro-glycerine has been used with success: **Angina Pectoris, Migraine, Palpitation,** associated with anæmia, **Sea-sickness,** and some forms of **Neuralgic Asthma,** but it is contra-indicated in this disease if there are symptoms of congestion.

OXALIC ACID.

Dr. Poulet ("Gazette Hebdomadaire," 1886, No. 20) extols oxalic acid as the best of all *emmenagogues.* It does not, however, he admits, abolish the pain experienced by many women in the discharge of the menstrual function, and it is of course, inoperative in amenorrhœa consequent upon organic disease. The dose in which he prescribes it is one teaspoonful every hour, of a mixture containing thirty-one grains of oxalic acid, about six ounces of water, and two ounces of syrup of orange-peel. Dr. Poulet also employes this drug in asthma, and in cases of bronchitis, associated with dyspnœa.

PARTHENIUM HYSTEROPHORUS.

This is a plant growing in Cuba, where it is extensively used as a febrifuge. A resinoid extract has been named parthenin, and is used in doses of 1 to 3 grains as a gastric tonic, and in doses of 30 grains as a febrifuge. It is also said to possess some anti-neuralgic properties.

PEREIRINE—Hydrochlorate of.

This is an alkaloid extracted from one of the apocynaceæ, which is indigenous to Brazil. Dr. Ferreira ("Bull. gen de Thérap," April 15, 1887), gives two doses of 15 grains, repeated at intervals of half an hour, in cases of malarial fever. Dr. Dujardin-Beaumetz has also employed it with success in the **Intermittent Fevers** of Brazil.

PHENETIDIN—Acetate.

This is an ethylized amidophenol, containing the acetic radical "acet-phenetidin." Hensberg has made experiments showing it to have true antipyretic properties, similar to acetanilide. "Acetphenetin," page 3.

PHYTOLACCA DECANDRA (Poke Root).

This drug is regarded as one of the most valuable of the American indigenous plants. It has been a popular remedy in chronic rheumatism and syphilis for many years. Its medicinal properties are believed

to be due to the large amount of caustic potash it contains, which exists in combination with a vegetable acid, which is nearly allied to malic acid. This is called phytolactic acid. The ashes of the plant yield 50 per cent. of caustic potash, and they have frequently been employed as a caustic-paste. The tincture is made from the fresh root and should be prepared with the strongest alcohol.

In skin diseases it has been used with success, in **Psoriasis**, **Pityriasis**, and **Tinea Capitis**, and also in the secondary eruptions of **Syphilis**. Dr. Searle, of New York, regards it as specific "for the tendency to **Boils**, which appear on the back and behind the ears."

We mentioned in the last edition of the "Dictionary of New Treatment" the remarkable success with which we had used this remedy in **Diphtheria**. There has been much discussion in America as to the form of diphtheria in which the remedy is indicated. Dr. Hale and Dr. Richard Hughes agree in considering that it is not the malignant type of diphtheria in which it is specific, but to the more common epidemic form, which has a catarrhal or rheumatic origin, beginning with severe pains over the body, especially in the bones, fever and prostration, the pain in the throat being chiefly at the root of the tongue in the tonsils extending to the ears. The exudation is either white or grayish-white, not the dark colour of the malignant form, nor is there the same fœtor of the breath.

This drug is also valuable in **Tonsillitis** and **Follicular Sore-Throat.**

The sphere of action of phytolacca in **Rheumatism** appears especially to be upon the fibrous tissues, the periosteum, and nerve sheaths. In **Periosteal Rheumatism**, especially that connected with a syphilitic taint, it is most valuable. Dr. A R. Smart, of Hudson, considers that a tincture made from the the berries acts better in these cases than the tincture of the root. It is also useful in that form of **Sciatica**, which is really a rheumatism of the sheath of the sciatic nerve, and which is distinguishable from true sciatica by the pain caused, when the extended limb is flexed upon the abdomen.

Another prominent and well ascertained action of the drug is in **Mastitis.** It has a great reputation among American farmers for reducing the "caking" of the udders of cows, and its power in relieving the engorgement of the breasts during lactation, is considered to be far greater than that of belladonna. In most cases it is used both internally and as a lotion. It has also been used with good results in **Neuralgia of the Mammæ.**

Dose.—Liq. Ext. ♏ 2 to 10; Tinct. ♏ 5 to 30; Lotion Tinct. ℥j to Aq. ℥j.

PICRATE OF AMMONIUM.

Mr. H. Martin Clarke has recently called attention to the value of this drug in **Intermittent Fever.** He states that he has used it for four and a half years, and has during that time treated 10,000 cases with the happiest results. Out of 6,000 cases it only failed in nine, and these were at once relieved by quinine. He states ("Lancet," February 19, 1887,) that he has practically given up the use of quinine since employing it. He considers ½ grain repeated four times a day a fair average dose. In the cases treated, ½-grain doses in the interval prevented the recurrence of the next attack of the fever, while in about twenty per cent. of the patients two or three attacks followed before the fever ceased. In one case of quartan ague, despite large doses of the salt, the fever recurred for six periods, gradually diminishing in intensity, and then yielded to it. It is equally successful in all the forms of ague, but it is a curious fact that the cases in which it failed to cure were all of the tertian variety. He has also employed this agent in the treatment of twenty-five cases of **Malarial Neuralgia** of various nerves, six cases of **Malarial Headache**, and one of **Malarial Colic.** In all these instances it cured completely and speedily. In remittent fever it does not appear to be of use; six cases of a severe type were treated with it without any effect. Neither is the enlarged spleen of ague benefitted by it. He concludes that in all varieties of intermittent fever, and in malarial neuralgias, picrate of ammonia is a valuable antiperiodic, and it is an efficient and perfect substitute for quinine. It has the following advantages over quinine: 1. It is much less expensive. This is an important consideration where, as in Indian practice, hundreds of cases of malarial diseases have to be treated annually. 2. The dose given is very much smaller. 3. It does not produce the unpleasant effects that quinine does,—headache, deafness, tinnitus, etc.,—nor does it disorder the digestion or cause nausea, as quinine is apt to do, in the doses in which it has to be given in India.

POTENTILLA CANADENSIS (also called P. Sarmentosa).

An infusion of the leaves and root of this plant, which grows freely in the United States, is recommended by Dr. Sampson Pope, of Newberry, S.C. ("Therap. Gazette," 1887), as a most valuable remedy for the **Night Sweats of Phthisis,** proving efficacious when atropine has failed. Its value has been recognised as a popular remedy for many years; and King, in the edition of his work (1870), commends it highly.

Dr. Pope recommends that boiling water should be poured upon a handful of the leaves and root, and the patient should be told to drink the infusion *ad libitum*. Probably some of our manufacturing chemists will give it us in a form more convenient for medicinal purposes.

PULSATILLA (Anemone Pulsatilla, Pasque Flower).

M. Bronevski ("L'Union Mèd.") has recently investigated the action of anemonin, an active principle of pulsatilla. He finds that it first stimulates, and afterwards paralyzes the respiratory centre. It diminishes cardiac activity and voluntary movement by its action on the spinal nerve-centres. He recommends its use in bronchitis, convulsions, cough, and asthma.

Mr. Gerard Smith writes as follows to the "Lancet," Jan. 15th, 1887: "Having witnessed the striking curative action of pulsatilla in acute orchitis and epididymitis, I should like to persuade others to follow Dr. Brunton's advice, and give this drug in inflammatory states of the testicle, epididymis, and spermatic cord. To have it in our power to subdue promptly the intense suffering of such cases, is a great blessing; and the relief is so rapid that it is even unnecessary to employ morphine to subdue the pain, whilst the swelling and heat subside more rapidly than under any other drug."

Dr. John Brunton in a communication to the Medical Society of London, 1876, related a series of cases of acute **Nasal, Bronchial, Vaginal, Vesical, and Conjunctival Catarrhs**, "so rapidly and successfully cured by it as to be, so to say, cut short." He also spoke of its value in some chronic affections of the mucous membrane, and in amenorrhœa.

Dr. Cooper considers it to be one of the most valuable remedies we possess for curing **Acute Inflammation of the Middle Ear.** It is also said to have a specific action upon the veins, resembling Hamamelis, and very efficacious in **Varicosis.**

Dr. Bartholow states that it is contra-indicated in gastro-intestinal disturbance, and blames the homœopathists for using it in these affections, because of its "irritating" nature; they, on the other hand, attach the highest importance to it in such affections, especially when there is **mucous** derangement, "a white tongue, nausea, but little vomiting, and absence of much pain," being given as the special indications by Dr. Richard Hughes. It is questionable whether the doses in which they employ it possess any of these irritating properties, of which Dr. Bartholow warns us.

Dose.—Tinct. ♏j. to v. As a Lotion ʒss. ad. Aq. ʒj.

PYRIDIN (Pyridine-Tricarboxylic Acid).

This is one of the products of coal-tar. It may also be obtained by completely oxidising quinine by means of permanganate of potassium. It is soluble in water, but not so in alcohol. Its taste is bitter, but not disagreeable.

It has some *antipyretic* powers, and acts as a strong sedative to the circulatory system ; and further, possesses *anti-fermentative* and *anti-putrifactive* powers.

It is said to be more powerful than quinine as a remedy in **Malarial Fever**, and free from the toxic effects of this substance.

Dr. Rademaker gives the following prescription in such cases :—

℞ Pyridine tricarboxylic Acid, gr. xxxii ; Syrupi aurantii, ℥ii.
M. ft. et Sig.—Teaspoonful every two hours, commencing twelve hours before the expected attack.

The same author has used it in 150 cases of **Typhoid Fever**, and states that when the temperature rises above 104°, it acts better than quinine or the cold bath—the temperature remaining longer lower, and there is less tissue waste during its action. The drug is also said to be of the highest value in spasmodic affections of the lungs, such as **Asthma** and **Pertussis.**

Kelemin, of Buda-Pest (" Med. Cherurj. Rund," Jan. 1st, 1887), says that in both inspiratory and expiratory dyspnœa, its use was constantly followed by success ; subjective and objective symptoms were alike relieved. While the effects of the drug varied with the peculiarities of the patient, its use was peculiarly efficacious in pulmonary, cardiac, and renal **Asthma**. The writer was almost led to consider it a specific in pulmonary and cardiac asthma.

Dr. Renzi considers it of great value in **Angina Pectoris,** and for increasing the cardiac systole, and so relieving the dyspnœa. He regards it as more valuable than digitalis, and states that its action is not cumulative. Dr. Rademaker also speaks highly of it in **Diphtheritis.**

It is not claimed that this remedy has any curative action, but that it is a most valuable palliative in the diseases we have mentioned. In respect to dosage, Dr. Rademaker gives 10 grains to break up the paroxysms in malaria, 1 to 2 grains during an attack of asthma.

Dr. Germain Seé uses it in asthma as inhalation, a few drops of a solution being placed on a handkerchief and directly inhaled, or a small teaspoonful of the crystals are burnt, and the fumes inhaled. This author and his pupil, Dr. Dandren, attach the highest importance to this drug in asthma and dyspnœa.

QUILLAIA SAPONARIA.

The root of this tree, which is supposed to belong to the rosaceæ, and which grows in South America, is recommended to replace the root of polygala senega, the active principle in both plants being saponin, but quillaia contains five times as much as senega. It is free from the bad taste, and is altogether better borne than senega.

These experiments have been confirmed by other authors, and show that given in doses of 30 to 88 grains in sweetened water it soothes **Cough**, and promotes expectoration. It is, however, contra-indicated when there is a tendency to hæmoptysis, and that it does not suit all cases of phthisis. See "Russ. Med.," No. 36, 1886, p. 595; "Aerztl Intell. Blätt.," No. 48, 1885.

REMISIA FERRUGENIA.

MM. Pinet and Duprat have recently investigated the action of extracts made from the root and plant. They found the aqueous extract the more powerful. Their experiments appear to show that it acts as a direct stimulant to the medulla, causing general hyper-excitability, and increasing the cardiac and respiratory movements. Convulsions, with death from asphyxia, were caused in some cases. Frogs were used for the experiments.

RHEUM.

This is not a new drug, but it comes before us as a new remedy.

Dr. Sydney Martin ("Practitioner," Oct., 1886) recommends the tincture to be given in three drop doses, twice or three times a day, to to cure **Ascarides**, and claims that this treatment is more effectual than that ordinarily employed.

RHIGOLENE.

This is a crude hydride of amyl produced by the repeated distillation of spirit of petroleum. It is inflammable; can be inhaled without irritation, and will produce general anæsthesia: locally it is not absorbed, but rapidly freezes the part.—(Martindale.)

Dr. Augustus Stabler ("Medical News," April 16th, 1887) calls attention to the fact that the employment of a mixture of rhigolene with one of the expressed oils is free from the irritation possessed by any mixture or combination that has water as a basis, and is more readily worked than the mixtures in which oils are employed. He employs a mixture of two drachms of olive oil or almond oil, and claims that it requires no more pressure than water to be converted into a fine spray. When sprayed into the mouth, the lips being closed upon the tube, and the patient be instructed to inspire quietly through the nose, the spray issues like a cloud from the nostrils. It is

thoroughly non-irritating to the most sensitive tissues, and, in fact, appears to act slightly as a local anæsthetic. It does not catch fire when directed over an uncovered lighted gas-jet, and does not produce general anæsthesia. It would, therefore, appear to enable us by its employment to succeed, by directing the spray in the mouth, in easily applying local medication to the glottis. Dr. Stabler calls attention to the following substances, which are readily soluble in this mixture:

Copaiba balsam, cubebæ ol., camphor, eucalyptol, iodine, iodol, iodoform, menthol (crystals), naphthalene (crystals), phenol (crystals), resorcin, sassafras ol., salol, terebinthinæ ol., thymol.

Resorcin is insoluble in rhigolene, but dissolves in olive oil to the amount of nearly five per cent. The mixture will hold about 3 per cent. in solution. Every oil thus far tried seems to be readily miscible with the rhigolene and sweet oil, so that the entire list of essential oils and turpentines may, *a priori*, be added to the above list.

He has not found any astringent that will dissolve in olive oil or in the mixture containing it, but *iodo-tannin* may be prepared as follows:

Take a saturated tincture of iodine and dissolve it in as much tannin as it will hold. This will mix with castor oil in any proportion, and the mixture may be thinned with rhigolene to the desired consistence. It makes a very handsome, clear red solution, and though slightly irritating, is not excessively so, and the irritation very rapidly subsides.

Cocaine is insoluble in the olive oil and rhigolene mixture, but like tannin, makes a perfect solution if first dissolved in alcohol, and then mixed with castor oil and rhigolene.

RHUS.

There are several species of rhus which have been employed—rhus toxicodendron (poison-oak), rhus-radicans (poison-ivy), rhus-venenata (poison-ash). So far as we can gather from present reports, there is no decided difference between their physiological or therapeutic properties.

A case of poisoning recently recorded by Altarnivando ("El Observador Medico") by rhus-radicans, corresponds closely to the action of rhus-tox. The symptoms produced in a man who had been collecting and cutting up the plant were as follows: He complained of chills and a feeling of extreme fatigue, and subsequently developed a rash, at first erythematous, and afterwards pustular, affecting chiefly the groins, axillæ, and other parts where the sudorific glands are most numerous. The action of the exhalation from the plant could not well have been direct, as the parts chiefly affected were covered with clothes, and so the writer suggests that the active principle must have entered

by the respiratory passages, being then carried by the blood to the skin, where its action became manifest.

Willeford ("Med. Record") and others have spoken highly of it in **Nocturnal Eneuresis**. He recommends the use of fluid extract 10 to 15 drops after meals. Experiments, however, by Altarnivando and Dr. Dominguez tend to show that the extract is inactive, and that the tincture should be employed.

Liniments, ointments, and plasters made with rhus have a great popular reputation for the relief of rheumatic pains and stiffness caused by **Rheumatism.**

Dr. Hedges, physician to the Half-Orphan Asylum of Chicago, states that 75 per cent. of all the cases of **Eczema** occurring therein have been cured by this remedy. We believe that as a rule it is only indicated in the earlier stages.

Dr. D. D. Martin, of Dakota, in a recent letter to the "Medical World," states that he collects the sap of the rhus-tox., and uses it as an application to **Hard Cancers.** He claims to have used it for 40 years without a single failure.

"When applying the sap, cut off the cuticle or crust, so that minute points of blood begin to appear; then apply the sap to the cut surface, exposing the tumour to the air until dry. In two days remove the black crust and apply again, as before; and continue until the tumor is completely removed."

Dose.—Tinct. ♏j. to v. internally; Liniment ʒi. ad. Aq. ʒj.

SACCHARIN (Benzoic-Sulphimide or Anhydro-ortho-sulphanin Benzoic-acid).

This is a white powder obtained from coal-tar. It is soluble in 500 parts of cold water, more soluble in alcohol and ether. It is intensely sweet, and a dilution of 1 in 10,000 has still a very sweet taste, very much like that of sugar, together with a peculiar by taste like bitter almonds (solution of sugar lost its sweetness in a dilution of 1 in 250). Saccharin, when given internally or subcutaneously, is exuded completely by the urine in an unaltered state; it was, therefore, not decomposed in the body. Neither the saliva nor the fæces contain any traces, even after large doses. It has, says Dr. J. Dreschfeld, scarcely any retarding effect on the digestion of either proteids or hydrocarbons; in fact, given in small quantities, it increases the diastatic action of malt in the presence of sugar. It has no injurious effect if given even in large quantities (2 to 5 grammes) in man, and produces no appreciable alteration in the appetite. The urine shows no alteration during its administration either in specific gravity or quantity. The

urea and sulphuric acid in the urine do not show any changes. The urine had, however, an intensely sweet taste, and does not undergo fermentation readily. Saccharin is slightly antiseptic. Beyond being a substitute for sugar, it possessed no therapeutic properties, except that, in two cases of acid dyspepsia, it relieved some of the troublesome symptoms. Its use was indicated in **Diabetes** and **Obesity.** In diabetic patients, it had no effect either on the quantity of urine or on the amount of sugar passed.

Mr. J. S. Thompson's experiments ("Pharmaceut. Journal," Oct. 23, 1886), show that a one per cent. solution of saccharin in hot water, although very sweet to the taste, has a flavour distinctly different from that of cane sugar. Ninety minims of this solution added to one containing four grains of sulphate of quinine quite masks the bitter taste of the alkaloid and renders it palatable. Thirty minims of the same solution sweetens half a drachm of tincture of iron, and it requires twenty minims to cover the salty taste of ten grains of bromide of potassium. It is said to possess anti-fermentative properties, and the experiments of Aducco and Mosso ("Chem. Test," Oct. 10, p. 218), show that its properties in this respect are about equal to Benzoic Acid, and a little less powerful than Salicylic Acid. Prof. Salkonslay (Ibid) states that the antiseptic property of saccharin is due to an acid action, and is greatly diminished upon neutralizing with sodium carbonate. It is now manufactured on a commercial scale, and we understand that the German War Office has ordered an enormous quantity, to take the place of sugar in its commissariat stores.

SALOL.

This is a salicylate of phenol discovered by M. V. Nencke. It is a white powder, with a faintly aromatic odour resembling the oil of winter-green. It is insoluble in water, and quite tasteless. Its formula is $C_{13}\ H_{10}\ O_3$.

It was introduced by M. Sahli at a meeting of the Medico-Pharmaceutical Society of Berne early in 1886 ("La Science Medicale," April 14, 1886). Insoluble in the stomach, it quickly decomposes when it comes in contact with the pancreatic fluid, and breaks up in the intestines into salicylic acid and phenol. Its therapeutic properties being the same as these substances. It contains 40 % of phenol, and 60 % of salycylic acid. It has been used by Sahli, S. Rosenberg, Feilchenfeld, and others in **Acute Rheumatism.** The two latter authors used it at first in 15-grain doses six or eight times a day. In almost all the cases this had the effect of bringing down the fever and relieving the pain in the joints in from twenty-four to forty-eight

hours. The number of doses was then reduced to from five to two per diem. The continuation of the treatment did not, however, appear to prevent the occurrence of complications, as peri- and endo-carditis and pleurisy ; sometimes also singing in the ears, sweats, nausea, and vomiting occurred and carboluria was always present for a time.

Dr. V. Aschenbach, of Corfu, reports in the "Fortschrith der Med." that, suffering from **Sciatica**, for which all known remedies has been tried in vain, he at last resolved to try this drug. In the evening he took a dose of half a gramme, and at midnight one gramme, after which he fell asleep, and remained perfectly free from his pains.

Dr. Feilchenfeld employed salol in various surgical cases, both internally and as an external application. In **Cystitis** and **Pyelitis** he gave two or three 15-grain doses per diem with excellent results, and with little in the way of disagreeable symptoms beyond a green colouration of the urine of no particular moment. Externally salol was found very useful in ulcers of various kinds, and notably in a very obstinate case of **Bubo** consequent upon a soft chancre, which had been operated on and treated with the strongest caustics without showing any disposition to heal. Salol, however, rapidly produced a change for the better, and cicatrisation soon occurred.

It is also said by M. Menchi to act as an antipyretic in **Phthisis**, as an antiseptic in **Intestinal Catarrhs, Typhoid Fever,** and **Cholera.** He also recommends its use in Diabetes. The following formulæ are given in the "Therapeutische Monatshefte," Sept. 4 :

℞ Salol, gr. xv ; | Ol. menth. pip., q.s. ad odorem.
M. Ft. chart. 10 in num. One powder to be placed on the tongue, and swallowed with water.

For external use in ulcers and skin diseases :

℞ Salol, gr. vi. to ʒj ; | Adipis.
Ol. olivarum, | Lanolini, āā ʒx.

In using salol as a powder it should be combined with starch, as

℞ Salol, gr. viii. to lxxx ; | Amyli, ʒxiiss.

A mouth-wash of salol is prepared according to the following :

℞ Ol. menth. piper., ♏ lxxv ; | Fruct. anisi. āā ʒiiss ;
Caryophyllor., | Spiritus, Oij ;
Cort. cinnam. Zeyl., | Coccionelli pulver., gr. lxxv.

Digest for eight days, and to the filtered fluid add Salol, gr. xl.

This liquid should be added, drop by drop, to one-fourth glass of water, until a milky cloudiness results.

SANDAL-OIL (Yellow), Oleum Santali Ethericum.

This is by aqueous distillation from the wood of Santalum Album, a

tree growing in India, Ceylon, and S. America. The oil is of a pale yellow colour, somewhat volatile, with a strong odour of amber.

It has been long known as a remedy for **Gonorrhœa**. Posner claims that it acts specifically upon the posterior part of the urethra.

Letzel ("All. Med. Central Zeit") gave 30 to 50 drops per day by means of capsules in cases of gonorrhœa, and found marked improvement especially in cases in the third and fourth week.

It has also been employed in **Renal Colic** with advantage by Gipoulon.

Its use is frequently accompanied by pains in the region of the kidneys and gastric disturbance, and it is suggested that it should be given either during or directly after meals.

SANTONATE OF ATROPINE.

This has been suggested by M. Bourbelon to take the place of Liquor Atropiæ Sulph., it being a more stable compound, and its mydriatic properties being the same. It appears as a white powder, free from hygroscopic properties. Its solution should be kept in yellow bottles.

SCOPOLINE.

Mr. Percy Dunn, writing to the "British Medical Journal," January 8, 1887, states that he has used this mydriatic, and "found that in the case of troublesome **Corneal Ulcers** which had been treated respectively with both atropine and eserine without success, rapid improvement followed the instillation of scopoline. And especially was this good effect shown in cases of severe **Interstitial Keratitis**, in which atropine had been previously employed. Again, in **Rheumatic Iritis** the use of scopoline was obviously effective in reducing the pain and injection of the globe. Upon no occasion have I seen any conjunctival or other irritation set up by its use, and I have found one grain to the ounce a sufficiently strong solution for my purposes.

I am disposed to believe that, in addition to its mydriatic power, scopoline is able to effect some control upon the vascular supply of the eye; the drug may be indeed the physiological antithesis of eserine."

SODIUM (Chloride of) Common Salt.

Is becoming more extensively used as a medicinal agent.

Dr. Allard Memmenger ("New York Med. Jour.," July 31, 1886), states that in **Bright's Disease** it will decrease the albumen and increase the amount of urea. He gives 10-grain doses three times a day one hour before or after meals. The second day he gives 20 grains three times a day, and adds 10 grains to the dose every day until 50 grains are being taken three times a day. He then diminishes the

dose to 20 grains, stopping it if nausea is produced, and increasing it if the albumen ceases to diminish. He gives it by means of capsule, each containing 10 grains.

It has been also used in **Sub-involution,** by Dr. Wyman, of New York. In cases in which the various plastic operations upon the cervix are advisedly withheld, he applies it in the dry state mixed with powdered elm bark, and powdered hyoscyamus leaves (one ounce of Na Cl to three ounces of elm bark and one drachm of the leaves) and applied to the swollen cervix uteri in quantities equal to an ordinary teaspoonful, every alternate day or oftener. He places the powder on a plug of cotton wool, attached to a piece of string so as to allow for withdrawal. The effect of the dried salt is said to be to deplete the uterus by the withdrawal of fluid. The antiseptic qualities of the salt, also tend to check or prevent putrefactive and fermentative changes in the vagina or uterus.

In **Migraine,** Dr. Rabow, of Berlin, finds that half a teaspoonful or more of common salt, taken as soon as the premonitory symptoms of an attack of migraine begin to show themselves, will frequently cut it short in about half an hour ; similar treatment has also proved of service in **Epilepsy,** as was remarked some years ago by Nothnagel ; the explanation being probably in both cases that a violent reflex action is set up.

As a *gargle* for the daily use of those who suffer from **Pharyngeal Catarrh** its value is well known. It appears to clear the throat by its solvent action upon the mucin. ℥j. to Aq. Oj. will be found sufficient.

SODIUM (Phosphate of).

The following statement by Logeait ("Archives de Pharmacie," Sept. 5, 1886), appears worthy of attention. "The medicinal worth of the phosphates of lime has hitherto been singularly overrated. The triple phosphate of lime, the biphosphate and monophosphate (acid phosphate), as well as the other principal preparations, such as the chlorohydrophosphate, lacto and citro-phosphates, are gradually disappearing from the field of practice, their places being occupied by the phosphates of potassium and sodium. Very recent observations have yielded the fact that the action of the phosphates of lime is exceedingly uncertain and doubtful, as they cannot be absorbed in the economy. No doubt, says Logeait, the soluble phosphates of lime remain dissolved as long as they are in the stomach, and the insoluble preparations become dissolved by the action of the gastric juice ; but as soon as they have passed into the duodenum, the alkaline bile precipitates them at once, and renders them insoluble again. Hence

through the greater part of the entire intestinal tract they act as totally inert matters, and are finally rejected with the rectal discharges.

It is different, however, with the phosphates of potassium and sodium, which are equally soluble in acid, alkaline, and neutral menstrua; they remain dissolved during their entire passage through the digestive channels, and are consequently resorbable.

The absorption of phosphates of lime is by no means indispensable to the explanation of the formation of osseous tissue. We can logically presume that the soluble salts of lime alone are absorbed, which precipitate neither in an acid nor an alkaline medium.

These salts meet, in the deeper channels of the economy, the phosphates of sodium and potassium, arriving with the same conditions of solubility, and form there by double decomposition phosphate of lime."

SOLANIN

Is a glucoside obtained from the potato. Dr. Geneuil claimed for it anodyne and hypnotic properties. Dr. Gaynard has recently ("Bull. Gén. de Thérap.," July 17th, 1887), examined these properties, and he concludes that it is highly irritating to the tissues, uncertain in action, and only massive doses will produce an analgesic effect. At its best solanin is not a useful analgesic. Moreover, it is an expensive remedy, and relatively large doses are required to produce an effect. The ordinary dose is from 1 to 3 grains, and the daily amount ranges from 4 to 8 grains.

Dr A. G. de Montguyon (*Ibid*) says, "Solanin may be prescribed without risk in strong doses. It has none of the inconveniences of morphine or atropine, has no cumulative action, and is specially a substitute for morphine. It does not cause congestion of the brain, even in elderly people, and probably not in children. In all conditions of excitement, spasm, or pain, solanin may be employed with a prospect of success.

SPARTEINE (Sulphate of).

This is one of the principle constituents of Scoparius "*broom*," and appears likely to take the highest place among cardiac tonics. The investigations of Dr. Gluziniske ("Przeglad Lekarske," No. 1, 1887), and M. Masius, of Brussels, show that in small doses it quickens the pulsations of the heart (which decrease in amplitude), in larger doses it slows the pulsations (which increase in amplitude), the resulting effect of such doses being to cause the pulse to become gradually smaller, then intermittent, and finally to cease.

Voigt and Leo's experiments are analysed in the "Medical Chronicle," April, 1887. Voigt found that sparteine in doses of $\frac{1}{15}$ to $\frac{2}{15}$

grain, in a series of cardiac and other diseases, stimulated the heart, increased the contractions, and raised the blood-pressure. It acts quickly, and its action lasts often over twenty-four hours, during which time the effect can be increased by a repeated dose. A pause of a few days after continuous administration is useful, as the drug acts the more forcibly afterwards. He finds it to be a diuretic, but not one of first rank. Toxic symptoms (very seldom observed with doses of $\frac{1}{15}$ to $\frac{4}{15}$ grain) were faintness, headache, palpitation, and uneasiness, which soon disappeared, even when the use of the drug was continued. Voigt would recommend sparteine for therapeutic use,—(1), in valvular disease with failing compensation; (2), in valvular disease without faulty compensation, as a tonic and sedative; (3), in weak action of the heart without valvular disease; (4), in pericarditis; (5), as an adjuvant to digitalis.

Leo exhibited sparteine in doses of 1½ grains every two hours in twenty-four cases. In only nine of these was there any objective result definitely traceable. In the remaining fifteen cases, eight showed subjective improvement, and in seven no result whatever was perceptible. In the first nine cases there was very marked diuresis. The drug did not influence the blood-pressure materially, and on this point the author differs from Germain Sée, who placed digitalis and sparteine side by side. He ascribes the diuretic action of the drug to stimulation by it of the renal epithelium. He found the drug to have a marked action upon the heart in relieving palpitation, pain, and dyspnœa. In the majority of cases, where relief was afforded, there was no evidence of any controlling of the heart's action.

The difference between the two observers is precisely what might have been expected from the difference of the dose employed.

This is very well described by Dr. Michell Clarke, ("Internat. Journ. of Med. Science," Oct., 1887), he says "Small doses, one-sixteenth to one-twelfth of a grain, produce the maximum effect in the regulation of the pulse. In one instance doses of one-tenth of a grain rendered a previously arhythmic pulse quite regular when large doses had failed to do so, and I had frequent occasion to note the same result. These small doses were also best for relieving palpitation, and for quieting down violent cardiac pulsation; small amounts also appeared to strengthen the force of the heart-beats, with very little raising of the arterial tension, and the stimulating cardiac action combined with small increase of tension, will be doubtless of great service where it is important to strengthen the force of the heart-beats without increasing markedly the peripheral resistance. Larger doses,

one to two grains, powerfully increase the force of the beats, but, at the same time, even more powerfully raise the arterial tension, and as an effect of this I found, in many cases, violent pulsation produced, with præcordial pain, and a strong but very tense pulse.

When the drug is taken regularly for some time, the general effect, apart from that of each individual dose, is found often to be an acceleration of the pulse and respiration-rate giving way, after the first day or days, to a subsequent slowing."

Dr. Michell Clarke's clinical observations on the use of the remedy are so valuable and precise that we quote them *in extenso*.

"Of ten cases of **Mitral Regurgitation**, due in seven to rheumatic fever, in one to endocarditis following chorea, in the other two patients to anæmia associated with violent palpitation, eight were completely relieved, and in the two anæmic patients the murmur disappeared, so that it was probably due to relative incompetence from dilatation of the left ventricle. The two cases that did not improve were very bad ones, and were afterward treated by digitalis, and other measures, without any benefit. The quantity of urine and of urea excreted was increased in six patients. Dyspnœa and præcordial pain appeared to be relieved first, followed by the disappearance of œdema in the most speedy instance after three days' treatment. An increased feeling of well-being was noticed by all, at first even by the two patients in whom the cardiac symptoms were not ameliorated. The pulse was rendered less frequent, stronger, and more regular.

In two or three instances it was found that a small dose, one-sixteenth of a grain, given at intervals of three or four hours, produced the greatest regulating effect on the pulse, and relieved arhythmia where larger and less frequent doses had previously failed to do so. A study of these cases and of others shows that sparteine is likely to be of great service in mitral regurgitation, relieving the symptoms in most instances rapidly and completely.

In **Mitral Stenosis** we may expect good results when the pulse is small, weak, and irregular, but in this form of heart disease the effect produced by it seems of shorter duration, and more immediately dependent on the continual administration of the drug. Though the patients improved whilst taking it, the good effects ceased on leaving it off. Four out of five cases of mitral stenosis to whom I gave it improved, however; one being able to lie down at night, which had been impossible for three years before.

In one woman, after taking one grain every six hours for three weeks, sharp cutting pains at the left shoulder blade and over the

heart came on, with a feeling of tightness in the chest. These symptoms ceased on reducing the dose.

In **Aortic Regurgitation** when the violent pulsation of a greatly enlarged heart produces much pain and distress, sparteine is a valuable remedy, quieting and regulating the excited cardiac action without unduly prolonging the systole; in these cases tracings showed that the excessive force and rapidity of the heart-beats were lessened, *pari passu*, with a gradual fall in the arterial tension. Small doses were here most beneficial. In other forms of hypertrophy it will be found useful when the heart acts violently and irregularly. In the hypertrophy combined with extremely high tension of chronic **Bright's Disease** the effect was to stimulate the cardiac contractions, while the arterial tension was not further raised nor the quantity of urine increased.

In a number of patients suffering from various forms of chronic lung disease with obstruction to the pulmonary circulation, and where compensatory changes had not been established in the right heart, or after being established had broken down, I found sparteine of great value; dyspnœa, præcordial pain, and palpitation were relieved almost at once, and in several a cough grew less. In two cases, where there was reason to suspect fatty or other changes of malnutrition in the heart-muscle, no benefit was noted.

Of five cases of **Asthma**, four were entirely relieved, the other was not benefited. The administration of sparteine was combined with inhalations of pyridin; improvement was slow, all being under treatment from one to five months. The severity of the symptoms was very much diminished, the attacks cut short, and rendered less frequent after a short time, one to two weeks, and the patients could keep comfortable whilst they continued the drug, but if they left it off were liable to relapse. Gradually the attacks returned less and less often and became milder, and finally ceased at the end of the winter; so that the ultimate effect in four out of five cases was satisfactory, though the slow progress was disappointing after the enthusiastic statements that have been made as to the value of sparteine in asthma. In one old man suffering from asthma and chronic bronchitis the pulse-rate, that had previously been 96-84, was slowed to 50 in the minute, and was rendered more forcible. This slowing took place after two months' continuous administration of the drug, and though accompanied by marked amelioration of general symptoms, must be perhaps, regarded as due to accumulation.

In cases of palpitation, without evidence of organic heart disease,

sparteine gives immediate relief, which becomes permanent after the remedy has been continued for a week or two. In **Chlorosis**, with dilatation of the heart and the usual murmurs, I found that sparteine, given in combination with iron, quickly relieved palpitation, pain, dyspnœa, and œdema of the ankles, and in due course the murmurs and the evidences of dilatation when present disappeared.

The effects of sparteine in three cases of **Graves's Disease** were remarkable, and if a wider experience confirms them, it will be a valuable remedy in this disease. In two of the cases the usual remedies, including a long course of arsenic, and the passing of a constant current through the neck, etc., had been tried without effect. On giving sparteine the pulse-rate dropped in one week from constant rates of 132 and 136 to the minute, to rates of 72 and 84 respectively, the coincident throbbing and pulsation of the thyroid and of the great vessels of the neck ceased. Other symptoms were relieved, especially the nervousness and weakness previously complained of, and the size of the thyroid tumour distinctly diminished. The gain in strength and general well-being, with improvement of appearance due to gain of flesh and colour, was striking.

In the third case, a more severe example of the disease than either of the preceding, there was general improvement, with diminution of violent pulsation in the thyroid and over the neck and face, but the pulse-rate of 144 was not reduced to less than 96 to the minute, varying between this and 108. This patient suffered from continual fine tremor of the muscles, especially in the limbs; while taking sparteine this tremor remained absent, but returned if the drug was left off. She has improved in strength and feels well whilst she is taking it. She has now been taking one-quarter of a grain every four hours for six months."

From the above reports we may gather that this is one of the most valuable of our "New Remedies." Its action is remarkably prompt, there is no fear of cumulative effects, and there appears to be no necessity to increase the dose in order to maintain its action, on the contrary Dr. Michell Clarke finds that a large dose may be gradually reduced without diminishing its effect.

DOSE.—$\frac{1}{10}$ gr. every 4 hours, to be increased if necessary.

SPIGELIA ANTHELMIA (Demerara Pink-root).

SPIGELIA MARYLANDICA (Carolina Pink-root).

Both these drugs are believed to be identical in their action.

Dr. H. G. Hare ("Med. News," March 12th, 1887) records the toxic effects produced by him on a dog. The dose given was 3 fluid

ounces of the fluid extract. He concludes that it acts upon the spinal cord, and not upon the motor nerves or cerebrum. On the heart it acts as a direct depressant, this effect being due to central inhibitory stimulation; and it seems to exert an even more powerfully depressing influence over the respiratory centre, as respiration ceases before the final cessation of the heart's action. It produced dilatation of the pupils and strabismus, the respirations become very rapid, great muscular weakness, but no loss of sensation.

In respect to its therapeutic properties, it has been much employed in America as a *vermifuge*. In Vienna, Dr. Fleischmann has used it in small doses in fifty-seven cases of **Rheumatic Carditis** with only one death. Dr. Russell speaks highly of it for pericarditis.

We have recently used it in one case of **Rheumatic Fever**, in which every joint was affected, and the pains were particularly severe, being of a shooting neuralgic character, in addition to the ordinary aching pain. It was given on the fifth day of the fever, the temperature being 103° F. In six hours it fell to 101·4°, and continued to gradually fall until the ninth day, when it reached normal. The pain diminished coincidently with the first fall of temperature, and on the ninth day all traces of the inflammation of the joints had disappeared, We have previously used it with success both in rheumatic carditis, and in those severe forms of **Palpitation** to which rheumatic subjects are liable, with great success. Its influence upon acute rheumatism requires further experiments before it can be recommended ; but the case we have recorded appears to indicate that such experiments might be made with advantage. Another complaint in which it has proved of value is in rheumatic affections of the eye, especially when the iris and sclerotic are the parts involved.

DOSE.—Tinct. 1 to 5 minims.

SPERÆA FILIPENDULA (Drop-wort).

An infusion of the bark of this shrub has been employed by Dr. F. T. Jagell, a Polish physician, in eighty-eight cases of persons bitten by rabid animals, and in twenty-six of these symptoms of **Hydrophobia** had commenced to exhibit themselves. He claims not to have lost a single case.

It has previously been known merely as an *astringent* and *diuretic*.

SPLEEN PULP

Has been used by Maragliano in cases of **Chlorosis** ("Deut. Meditz. Zeit," Jan. 3rd, 1887) with very favourable results. The following is the formula employed :

℞ Emuls. amygd. amar., ℥x | Pulpæ splenic., ℥iv ;
Spt. vini gallici (cognac), ℥ij.

STENOCARPINE.

This is an alkaloid, isolated from the "Tear Blanket Tree," the anæsthetic properties of which were discovered by Mr. Goodman, a veterinary surgeon of Louisiana.

Dr. Roberts Bartholow ("International Journal of Med. Science," Oct., 1887) gives the following account of the researches which have been made respecting this drug:

The physiological actions of stenocarpine have been carefully studied by Dr. Claiborne and Dr. Knapp, both of New York. Their conclusions agree closely for the most part. A 2 per cent solution, with which Dr. Claiborne was supplied, was employed by both investigators, Dr. Knapp having obtained a small quantity from his colleague. As the powers and properties of cocaine are so well known, a comparison of the new anæsthetic with its older cogener will develope their respective qualities the more fully, and by the contrast, when differences are found, more characteristically.

Stenocarpine acts as an analgesic and anæsthetic when applied in solution to the mucous membrane at any point. Dr. Claiborne asserts that it has the same influence on the sensibility of the skin; but Dr. Knapp did not find it so, although his negative result may be attributed to the small quantity of the alkaloid with which he operated. When a plentiful supply of the new alkaloid becomes available, this question can be easily and finally settled. Injected beneath the skin, an anæsthetic area is produced, having the limits which the extent of the diffusion determines, as is, also, the case with cocaine.

When applied to the conjunctiva the anæsthetic effect takes place in from five to ten minutes, and in from ten to fifteen minutes the pupil dilates and the accommodative apparatus becomes paretic and then paralyzed. As compared with cocaine, the effects of stenocarpine on the pupil and on the accommodation are far greater. The dilatation of the pupil is nearly equal to that produced by atropine, but it is not so persistent. In certain cases the pupil of the other eye contracts to a mere pin's head in size. The anæsthetic and analgesic effects are quite equal to those of cocaine in corresponding strength.

Stenocarpine is more actively toxic than cocaine. It causes tetanic spasms not unlike those of strychnine (Knapp); but the tetanoid paroxysms are accompanied by trembling, weakness, and incoördination, and, finally, paralysis ensues—in fact, that indicates exhaustion of the centres, at first stimulated. Very rapid action of the heart occurs, probably because stenocarpine paralyzes the pneumogastric, and thus removes the inhibition. As the effects deepen, paresis of the

respiratory muscles comes on, and ultimately they become paralyzed, the action of the heart failing after respiration has ceased. Although additional observations are needed to settle the nature of the influence exerted on the respiration and circulation by stenocarpine, there is little doubt that the explanation above given will prove to be true.

Knapp's observations on the therapeutical applications of the new remedy, and the comparison between it and the actions of cocaine, are characteristically thorough, and have an enduring interest for all those practising ophthalmology. We have space here for the principal points only.

Whenever, with the actions of an anæsthetic, a mydriatic is required, as in **Iritis**, stenocarpine is preferable to cocaine. It is also better than atropine when there is a tendency to **Glaucoma**, and much pain is felt. When, however, an anæsthetic is necessary, and a mydriatic is not, then cocaine becomes more useful; and this condition of affairs includes all the ophthalmic surgical procedures. As stenocarpine is nearly as powerful as atropine in dilating the pupil, as its influence continues only about half as long, it is preferable to atropine for this purpose.

It need hardly be explained that stenocarpine can be substituted for cocaine as a local anæsthetic in the numerous maladies for which a local anæsthetic is needed. If it shall be proven hereafter that in a sufficiently concentrated solution stenocarpine anæsthetizes the skin, as well as the mucous membrane, it will assume the first place as a local anæsthetic and analgesic.

It must be stated also that some subjects possess a remarkable susceptibility to the actions of stenocarpine. This fact is true also of cocaine. In a few instances, when stenocarpine has been instilled into the eyes, weakness, faintness, a cold sweat, and a rapid but feeble action of the heart have ensued, as it is so powerful. Knapp utters a caution, and advises that it be not injected into very vascular tissues.

STROPHANTHUS.

This is a climbing plant belonging to the Apocynaceæ. It grows in Central Africa, Java, and Sumatra.

The seeds are regarded as the active part of this plant, and a tincture of the proportion of 1-20 made from these is generally employed. Each dose should be dropped separately into the vehicle at each administration, when made into a mixture dangerous decompositions are likely to take place. The seeds contain 8·57 per cent. of an active principle called strophanthin; this is highly poisonous, the medicinal

dose being $\frac{1}{200}$th of a grain. We owe the introduction of this remedy to Professor Fraser of Edinburgh.

Dr. Quinlan, speaking of its therapeutic properties, says it is a valuable cardiac tonic and strengthener of the heart-muscle in cases of **Typhoid Fever** with enfeebled first sound and tendency to cardiac failure. This is by far the best thing that strophanthus can accomplish; and the increment of the first sound both in length and volume, and increase of the radial pulse, was distinctly perceptible both to finger, ear, and sphygmograph, within fifteen minutes of taking the remedy. This clinical observation is interesting in relation to the paper read before this Section, by Dr. Wild, of the Owens College, Manchester. That observer, testing the effect of different drugs on the contraction of muscle just removed from the body, proved by experiment that strophanthus causes marked contraction of the muscular fibre in ten minutes, a contraction which arrives at its maximum in fifteen minutes. It is important to find two observers arriving at similar conclusions, one at the bedside and the other in the pharmacological laboratory; in fact, the dose of strophanthus proper in each case can best be gauged by watching the effect upon the pulse or upon the heart's action. In **Œdema** of the legs, the result of cardiac obstruction, great diminution of the swelling is obtained; and in cardiac obstruction generally great assistance is given to the labouring heart. In **Fatty Hearts** cardiac action is steadied and irregularity is diminished, but no permanent good is accomplished. Finally, strophanthus is in no respect a stimulant, but a pure *cardiac tonic*. It does not lose its effects by the system becoming habituated to it; on the contrary, its action from first to last is uniform. Contrary to digitalis it does not accumulate in the system, nor, while increasing cardiac muscular impulse, at the same time accentuate vascular muscular resistance, but acts upon the heart only. It encourages the action of the kidneys. In anæmia with weak heart, or anæmic murmur of the heart, it strengthens cardiac action and accelerates the action of the iron.

SULPHUR.

Professor Hugo-Schulz, of the University of Greifswald, in the "Deutsche Med. Wochenschrift," No. 2, January, 1887, after many trials of sulphur in **Chlorosis**, arrives at the following conclusions: In true chlorosis where iron is not producing the desired effect, sulphur may be given with advantage. After the employment of sulphur, for some time, iron acts with greater effect. In cases of chlorosis complicated with catarrh of the stomach, sulphur is not well borne.

SYRINGA VULGARIS (Lilac).

A glucoside has been obtained from the bark of this tree, to which the name of syringin has been given. It occurs in the form of white acicular crystals, very soluble in water and alcohol. It has been recommended as a remedy for **Malaria,** and stated not to be poisonous; but little is known yet of its properties, nor has the dose been ascertained.

TANGENA VENENIFERA (Madagascar Ordeal-bean).

Some experiments by Quinquaud show that this drug acts as a stimulant and paralyzer of the spinal cord, the reflex excitability of the peripheral nerves remaining intact after the motor nerves are paralyzed. The respirations and the heart's action are first quickened and then slowed. He has used the extract of the seed in doses of 1 to 1½ grains in **Paralytic Affections** of a toxic nature, **Atrophy of the Intestines,** and in **Tremor.**

TERPIN-HYDRATE.

This is a derivative of oil of turpentine. It is sparingly soluble in water, more freely so in alcohol and oils.

Mowa has given doses of 45 to 60 grains in twenty-four hours without ill effects. He states that it exerts no marked influence on the temperature, pulse, or respiration; but it sometimes modifies the bronchial mucus, diminishing the quantity of the expectoration and rendering it more fluid. In the broncho-alveolitis of the young it acts well: in **Phthisis** it loosens the expectoration, and appears to act as a *hæmostatic* in **Hæmoptysis:** under its prolonged use the urine becomes less acid or neutral, the phosphates increase, there is never albuminuria, glycosuria, or hæmaturia. It is also useful in **Vesical Catarrh.**

Dr. Harvey, of Birmingham, has recently recorded a case of severe renal congestion brought on by the use of terebine in doses of 10 drops every four hours.

DOSE.—Terpin-Hydrate, 2 to 6 grains.

THALLIN.

This drug has formed the subject of some very interesting observations by Dr. Ehrlich, which show that the drug has a great affinity for fat, and collects in great quantities in organs containing adipose tissue. The experiments are recorded "Deut. Med. Woch," No. 48, 1886, and will be found described in the "London Medical Record," March 15th, 1887. Ehrlich's very extensive experience with this drug in **Typhoid Fever** coincidently with a number of cases treated hydropathically,

gives importance to the following statement of his opinion respecting the two methods :

The advantages of the thallin treatment are: (1.) The marked beneficial effect on the sensorium and the consequent avoidance of complications. (2.) After apyresis the specific feeling of illness disappears to make room for absolute euphoria. (3.) Thallin agrees remarkably well with the stomach, some few cases of idiosyncrasy excepted, the appetite being at once good after apyresis. (4.) Ehrlich assumes that thallin has a good effect on the local processes in the intestinal canal, since he never met with intestinal hæmorrhage and peritonitis. (5.) The largest doses do not affect the heart or kidneys unfavourably, the pulse becoming less frequent, and the traces of albumen disappearing. Perspiration occurs, but is not inconveniently great. On the other hand, thallin appears to retard retrogression of the splenic swelling, and during convalescence, patients generally remain pale, with a feeling of lassitude. Though it does not hurt certain parenchymata, it has an unfavourable effect on the general nourishment. This may be accounted for by the fact that, like antifebrin and antipyrin, thallin causes a considerable increase of urine, partly perhaps because it causes thirst. With the hydropathic treatment death occurred chiefly during the height of the fever, while with thallin it occurred later. In the height of the disease thallin is most efficacious, warding off the peculiar dangers better than any other known remedy; while in the later period and during convalescence the hydropathic treatment is to be preferred, because it does not tax the strength of the patient as thallin does. Hence Ehrlich intends to confine the use of thallin to the period of the height of fever, and then to follow the hydropathic method.

After trials of different modes of dosage, Ehrlich now recommends for women as an initial dose from 0·12 to 0·15 gramme, and for men from 0·15 to 0·20 gramme, and this to be increased daily by $\frac{1}{100}$ gramme. During the time of the increase of the dose the temperature ought to be taken every hour or two, and after the maximum dose has been reached, two or three times a day will be amply sufficient. A fatal case has recently led Prof. Ehrlich to fix the maximum hourly dose (of the tartrate) at 3 grains. He regards cardiac or renal weakness as contra-indicating the use of the drug.

THALLIUM (Sulphate of)

It has been shown by Kreis that solutions of this salt ($\frac{1}{4}$ to $\frac{1}{2}$ per cent.) completely destroy gonococci which were prepared artificially by inoculating a nutrative medium with gonorrhœa-pus.

Prof. Goll has employed solutions for injections in **Gonorrhœa**, and uses also bougies of cacao butter, containing 5 per cent. of sulphate of thallium. His results were considered most satisfactory.

THUJA OCCIDENTALIS

Has recently been employed by French and American physicians, both internally and externally, as a remedy for **Warts**. The form of warts which yield to its influence are those with a pendulous character with a narrow base resembling **Polypi**, for which it has also been used with advantage. It is said to be also one of the best remedies for **Condylomata**.

We mentioned (Dict. of New Treatment, 1887, p. 414) a case of **Epulis** of the lower jaw, which recurred after removal by operation, which was rapidly cured by the internal administration of this remedy. It is now nearly three years since, and there has been no tendency to a return of the disease.

An oil obtained from the plant has some reputation as a vermifuge, and an ointment made from the leaves has been used in rheumatic affections.

Dose.—Tinct. 2 to 10 minims; Liq. Ext. 1 to 5 minims.

TULIPINE.

This is an alkaloid extracted from the whole plant of the common garden tulip. Its chemical and physiological effects have been compared to those of colchicine, scillitine, and veratrine. Like these, it neutralises acids and yields crystalline salts. Its formula has not yet been ascertained. In doses of $\frac{1}{3}$ gr. it is poisonous to bacteria; $1\frac{1}{2}$ gr. suffice to kill a cat. Death is caused by paralysis of the heart, but it also exercises a powerful influence on the nervous system. In medicinal doses, $\frac{1}{12}$ gr., it increases the salivary secretion, and is both diuretic and laxative.

ULEXINE.

This is an active alkaloid obtained by M. Gerrard from ulex europæus (common furze). Its physiological action has not yet been investigated.

URETHAN.

This is an ethylic ether of carbamic acid. It appears as white rhomboidal crystals, freely soluble in water.

The effects of this drug have recently been summarized by Dr. A. P. Langovoi ("Vratch," No. 7, 1887) as follows:—(1.) The hypnotic effect of urethan manifests itself in different kinds of animals in different degrees. Thus, it produced a powerful effect on rabbits, while it acted very slightly on dogs. (2.) Even large doses of urethan

had not any marked poisonous effect on the heart, nor did they depress the arterial tension. (3.) Breathing is quickened by urethan. (4.) The drug is well borne by patients, has not a disagreeable taste, and does not cause any gastric disturbance. (5.) Given in ordinary medicinal doses, urethan does not produce any unpleasant secondary effects such as failure of the cardiac action, etc. (6.) Its chief effect is on the brain; it does not seem to act on the peripheral nervous system. At all events, in cases of sleeplessness from cough or pains, it has no marked effect. (7.) Urethan is not a powerful hypnotic, and in certain cases it is inactive or nearly so. Nevertheless, as it has no tendency to produce any untoward secondary effects, it may be regarded as a faintly useful addition to our therapeutical resources. It is a useful hypnotic in nervous insomnia, as well as in sleeplessness in the course of acute fevers.

Dr. Kraepelin ("Neurolog. Centrlalb,") March 1st, 1887, states that it is useful as an hypnotic in cases where there is not great excitement, thus it is disappointing in delirium tremens, while it gave excellent results in **Melancholia**. He considers it to have advantages over paraldehyde on account of the longer duration of its action, and because its taste and smell are not so disagreeable.

Andrews ("Amer. Jour. of Insanity") has used it with success both in cases of **Acute Mania** and melancholia with favourable results. He found its effects were produced about one hour after administration, the dose usually employed being 30 grains, but in two cases 60 grains were given without bad results.

URTICA URENS (Stinging Nettle).

A recent article in "Les Noveaux Remèdes" proclaims the juice of this familiar herb as the best remedy for all kinds of **Hæmorrhages**. The juice is said to be the most efficient preparation, but it does not keep well. Recently M. Peneau has prepared a syrup from the juice which is said to be both efficient and stable.

It is also said to be very valuable in increasing the *secretion of milk* in nursing women.

VANILLIN.

This is the aromatic principle of vanilla. Experiments on frogs show it to be a stimulant and paralyser of the spinal cord, causing symptoms resembling those of strychnine. It is said to have anti-fermentative properties and has been recommended as a *gastric tonic*. Dose.—¾ grain.

VERATRUM VIRIDE (Green Hellebore).

The action of this drug has recently been investigated by Dr.

N. Chistovich in Prof. Botkin's laboratory. He found that in warm-blooded animals the cardiac contractions were at first distinctly diminished, but subsequently they were accelerated, the primary slowing of the pulse depending chiefly on the action of the drug on the centres of the vagus, causing an increase in the irritability of its peripheral extremities. The action on the inhibitory cardiac apparatus was manifested when the accelerator nerves and the sympathetics of the vagi were divided. The secondary acceleration of the pulse was due to a paralysing effect on the central and peripheral cardiac inhibitory apparatus, as well as to a stimulating action on the central and peripheral accelerator apparatus, this stimulation being partly accounted for by the direct action of the drug and partly by the rise of arterial pressure, which was itself due both to the increased force of the cardiac beats and to contraction of the small arteries. The number of clinical observations was much smaller than those conducted in the laboratory. The doses given were usually from 10 to 20 drops of the 1 per cent. liquid extract. The cases which were found to be benefited by this treatment were those of **Cardiac Disease** when compensatory hypertrophy had not been established. In these there was almost immediate improvement in the dyspnœa and anasarca, the secretion of urine augmenting considerably and the patients feeling a great deal better. In two cases where the cardiac disease was complicated by nephritis and in one where there was pleurisy with effusion the veratrum did not seem to produce any satisfactory improvement but it was only tried for a very short time, and no attempt was made to increase the doses.

VIBURNUM PRUNIFOLIUM (Black Haw).

This has long been favourably known as a household medicine. Its use has been revived by Dr. J. H. Wilson, ("B. M. J.,") especially as a remedy for checking **Abortion.** Dr. J. M. L'voff states that in nine cases where abortion had become a habit, all went to their full term. In six cases abortion had commenced and in all of these it was checked and the patients completed their proper time of pregnancy.

Dr. Cheves Betvill records a case ("Therapeutic Gazette,") of a lady who had aborted three times, in which this drug was employed with complete success. He mentions also sixteen other cases in which the success was not complete, but on the whole satisfactory. He has also used it with beneficial results in **Obstructive Dysmenorrhœa** and also in **After Pains.** Other observers have also reported satisfactory results.

Dr. Betvill used liquid extract 30 to 60 minims every two to four hours. Dr. L'voff employed the extract, 2 grains four times a day in pill or powder.

WITHANIA SOMNIFERA.

This drug, which has an ancient repute as a *hypnotic*, has recently been employed by Dr. Trabut of Algeria in cases of **Alcoholism, Emphysematous Dyspnœa,** and **Phthisis,** for the purpose of inducing sleep, with a considerable amount of success, greatest apparently in the former two classes of cases. In some respects it appears to Dr. Trabut to be a more trustworthy hypnotic than opium. A tincture, which is very bitter, a crystalline sulphate, and an extract have been prepared by M. Duval, professor of chemistry, who recommends the extract in pills. It is stated not to have a mydriatic effect.

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AN APPENDIX TO THE DICTIONARY OF NEW TREATMENT, 1887.

ABDOMEN (Surgery of). *A. W. Mayo Robson, F.R.C.S.*

Abdominal Injuries are of great importance because of the contained viscera.

They may be divided into four classes :—

(*a*) Simple concussion.
(*b*) Visceral lesions without external wound.
(*c*) Penetrating wounds without visceral injury.
(*d*) Penetrating wounds with visceral injury.

(*a*) *Simple concussion* of the abdomen may produce all the serious symptoms of visceral lesion, even to fatal termination, owing to shock to the sympathetic nervous system. Shock may be severe, but if there be no gross lesion it usually tends to pass off under treatment. If there be no perforating wound of stomach or intestines, the liver dulness will be present.

Treatment, by warmth to the surface and to the extremities, by subcutaneous **Injection of Morphia**, and by rest and low diet.

Dr. Morton ("Med. News," Feb. 19th, 1887), proposes to lessen shock by irrigating the peritoneal cavity with hot water through a small opening in the peritoneum.

(*b*) *Visceral lesion* without external wound, if not treated by laparotomy, is fatal in 96 per cent. of all cases (Chavasse). Diagnosis of importance (see paper by Dr. Denny of New York, "Med. News," March 6th, 1886). Shock, usually severe, may come on immediately, or may be deferred for some hours ; pulse, usually rapid and feeble ; vomiting, nearly always present ; meteorism, sooner or later ; absence of liver dulness, if stomach or bowel injured ; dulness in flanks, if extravasation of blood, or of visceral contents ; abdominal pain often localised ; anxious expression, and later on, signs of peritonitis.

REFERENCE.—"Clinical Society's Transactions," 1887, "Annals of Surgery, August," 1887, p. 130.

TREATMENT.—If visceral rupture suspected, laparotomy should be performed at once; first as a means of diagnosis, and secondly of treatment; when, if gas or fluid escape through the exploratory opening, the incision must be enlarged, and, whatever operative measures may be necessary, undertaken; but, if the peritoneum appear healthy, the wound can be closed and the patient will be no worse for the small operation.

(For special treatment refer to *Stomach*, *Intestine*, *Spleen*, &c.)

Of 15 cases operated on, all died; although one of Mr. Croft's, at St. Thomas's Hospital, recovered from primary operation.

If no operation be performed, absolute rest, **Opium**, stimulants, warmth, and low diet, will be called for.

REFERENCE.—"British Medical Journal," May 7th, 1887, lecture by Sir W. MacCormack.

(*c*) *Penetrating wounds* without visceral injury caused by sharp or blunt instruments, or by gunshot.

Diagnosis of penetration of abdominal cavity can be made by probing the wound if it be not evident without; or, in the case of a bullet wound, the track may be enlarged under antiseptic precautions.

Dr. Morton ("Philadelphia County Med. Soc.," Jan. 26th, 1887), says, that laparotomy is indicated in every case in which penetration of the abdominal cavity is proven, there being no constant symptoms of even extensive intra-peritoneal wounds. Dr. Nancrede holds the same views (Annual Meeting American Surgical Association).

Dr. Dennis ("Med. News," Feb. 27th, 1887), reports a case in which after a stab wound in the abdomen, he performed laparotomy, but found no visceral lesion; the patient recovered. He says laparotomy ought to be performed in all such cases, and not simply enlargement of original wound. Dr. Bull (Proceedings of New York Surgical Society, in "Med. News," Nov. 6th, 1886), said, that no absolute rule could be laid down as to the propriety of exploratory laparotomy in cases of gun-shot wound of abdomen, when no certain evidence of intestinal perforation existed; that each case must be judged on its own merits. Dr. Skelley ("Annals of Surgery," July, 1887), reports a case in which after abdominal section no visceral wound was found, but the ball and extravasated blood having been removed, and a vessel ligatured, the wound was sutured and recovery ensued. Sir W. MacCormack, in his monograph on abdominal section, 1887, pages 9 and 10, relates several cases of recovery after perforate wounds without rupture of viscera. Surg. Major Colson ("Lancet," November 5th, 1887,) reports two cases of perforating wound of abdomen with

protrusion of intestine, in which, after cleansing and returning the bowel, and washing out the peritoneal cavity with **Carbolic** lotion, the patients recovered.

If laparotomy be not performed, any protruding viscera should be cleansed and aspecticised as much as possible with a 5 per cent. **Carbolic** solution, and then returned, the wound being aspecticised and the peritoneal edges brought into apposition.

Rest, **Opium**, and light diet, will be called for.

(*d*) *Penetrating wounds* with visceral injury. Diagnosis of visceral lesion, if wound be large, is easily made; but in case of stab or gun-shot wound, may be impossible in an early stage, except after laparotomy; which, with due precautions (see *laparotomy*), need not increase the danger of the patient. Emphysema of tissues in neighbourhood of wound, or fæcal extravasation, point to wounded alimentary canal; as does also abdominal distension with absence of liver dulness: serious collapse, with absence of radial pulse, suggests wound of some vessels in the abdomen, or of spleen, liver, or kidney; but there may be great shock without visceral lesion.

Treatment should be by immediate laparotomy, so as to expose and ligature wounded vessels, to suture ruptured bowel, to remove or repair injured viscera, and to thoroughly cleanse and render aseptic the peritoneal cavity, which, if much fouled can be drained by means of a glass tube.

Dr. Morton ("Philadelphia Cy. Med. Soc.," Jan. 26th, 1887), collated the records of 57 cases of laparotomy for injury, of which 21 patients recovered.

For reports of cases, remarks on diagnosis, and rules for treatment, see Dr. Dennis, "Med. News," Feb. 27th, 1887; Dr. Jenkins, "Annals of Surgery," October, 1887; Dr. Wyeth, "New York Med. Journ.," March 19th, 1887; Dr. Parkes, "Internat. Med. Congress," 1877; Sir W. MacCormack, "Lancet," May 7th, 1887; Dr. Keen, "Med. News," May 14th, 1887, "Annals of Surg.," August, 1887; and Dr. Bull, "Med. News," Nov. 6th, 1886.

For treatment of injuries to particular viscera, see "Stomach," "Spleen," &c.

ABORTION. *John W. Taylor, F.R.C.S.*

This is generally due to syphilis, kidney disease, accident, or artificial induction by drugs or instruments.

For the treatment of threatened abortion **Rest**, small tonic doses of **Ergot** when there is hæmorrhage, or the use of **Viburnum Prunifolium** (grs. ij. of extract in pill three times a day), give usually the best results.

Chloral in combination with **Bromide of Potassium or Sodium** is specially useful for urgent nervous symptoms.

If abortion be due to syphilis this must be treated continuously with **Mercury** and **Iodide of Potassium.**

When may it be necessary or good practice for the sugeon to induce abortion or premature labour?

(*a*) In cases of pelvic *deformity*, (*b*) in some cases of co-existing *tumour*, (*c*) in kidney disease, where there is much *albuminuria*, *retinitis* or *uræmic convulsions*, and (*d*) occasionally in *vomiting* and *chorea*, when these are rebellious to all milder measures. The most usual and simplest method of performing this operation is to pass an absolutely *new* gum-elastic or celluloid catheter within the uterus, and let the amniotic fluid slowly drain away until labour results.

For *incomplete abortion* when a portion only of the uterine contents have been evacuated and hæmorrhage continues, the best treatment is to give **Ergot** for one week, and if this is without result to promptly *clear out the uterus* with a dull curette or spoon. The cervix is generally sufficiently dilated to do this without special preparation. If not, it may be necessary to adopt one of the methods of dilatation of the cervix previous to operating (see *uterus, dilatation of).*

Prof. Budin, in a recent lecture delivered at the Academy of Medicine, has criticized unfavourably surgical interference in cases of retained membranes. This does not appear to be in accord with any known English experience or opinion.

ABSCESS. *W. H. Elam, F.R.C.S.*

Cold Abscess.—Any reliable method for treating these abscesses will be welcomed by all practical surgeons. Aspiration, although now and again successful, can hardly be relied upon. Incision even with the most rigid antiseptic precautions frequently entails grave constitutional disturbance, and the abscess only heals after a long period of exhausting suppuration.

In regard to the pathogenesis of these abscesses, Dr. Farre has examined thirty cases, and in very few instances were bacilli found in the pus.

The remarkable fact observed, was, that pus containing no bacilli when injected into animals in the usual manner and with the usual care, set up tuberculosis, although the pus gave no tubercle-bacilli when cultivated. The only difference detectable in pus from these abscesses and simple inflammatory pus, was, that in the latter the cells are long and well preserved, there being little or no debris ; but

what he calls pyogenic cocci existed. In the former the cells are ill-formed and wasted. There existed much fatty debris but no cocci.

For the treatment Dr. Andrassy has found most success from injecting into the abscess cavity the following, viz., Iodoform 10 per cent., glycerine 50 per cent., water 50 per cent. He makes two or three injections at intervals of about fourteen days, and in from four to five weeks obtains a complete cure. Of twenty-two cases, twenty were perfectly cured. There were none of the symptoms of iodoform poisoning observed. This plan is highly recommended for large abscesses. ("Deut. Med. Wochschft. No. 84; Bruns. Beit. z. Klin. Chirurg. Bij S 311.")

Psoas Abscess.—In some very chronic cases aspiration of the contents of the abscess cavity has proved effectual in curing the case, and if there be no contraindication this method should be adopted. In other cases, Mr. Edmund Owen says, it is impractical to look forward to a spontaneous cure. Sooner or later the abscess must be evacuated by nature or by art, and he advises that the abscess cavity be emptied, cleansed and drained. The earlier an opening is made the better; for delay may entail the extravasation of pus, and the formation of a needlessly large and intractable cavity. The abscess should be opened and irrigated from the front, and drained through a counter-opening in the loin. Washings and drainage should be thorough; for a small abscess the single opening at the back may suffice. Warm iodine-water (decolorised) is the most suitable fluid for irrigation; the sublimate solution (1 in 1,000) is dangerous, at any rate in a large or double psoas abscess in childhood. The most convenient dressings are bulky pads of wood-wool, and gauze bags of finely picked oakum; they should be fixed under a towel tightly pinned as a binder. Pus may rapidly collect on the opposite side of the spine, after a single abscess on the one side has been evacuated; therefore, if the temperature rise and remain high after the evacuation of a unilateral abscess, the formation of a second abscess should be watched for, and it should be opened as soon as it is detected; thus convalescence may be at once established. Bilateral abscesses should be attacked simultaneously: they are likely to be in intercommunication, and the area of suppuration cannot be kept aseptic unless both sides are washed and drained. ("Brit. Med. Journal," April 23, 1887.)

Perityphlitic Abscess.—These cases commencing in typhlitis or perityphlitis, or from perforation or obstruction of the vermiform process are not unlikely to prove fatal if improperly managed in the first few hours after the onset of the symptoms. Purgatives should be avoided

but evacuant enemata may be given. Absolute rest and opiates are necessary. Warm poultices or ice-bags may be applied over the cæcum according to the indications.

If there be any suspicion that pus already exists, surgical interference is urgently called for, otherwise the pus, which at first is usually extra-peritoneal, may find its way into the general peritoneal cavity and so prove fatal.

Dr. R. F. Weir, New York, contributes a paper of which the following is a summary. He advocates early surgical interference. He states : (1,) that most perityphlitic abscesses are due to inflammation or perforation of the appendix vermiformis ; (2,) that the mortality in such lesions is greatest prior to the third day ; (3,) that as soon as it can be recognised, pus should be evacuated extra-peritoneally, if possible, or by a lateral laparotomy, and the cavity drained ; (4,) that if aspiration fails to detect pus where a tumour exists, it is wiser to make an early extra-peritoneal exploratory incision ; (5,) that where general peritonitis is progressing with any history of pain in the right iliac region a median, or in preference, a limited lateral laparotomy should be made, to explore the region of the appendix within forty-eight hours from the inception of the disease ; (6,) that if pus is thus recognised, it should be evacuated, and a drainage-tube inserted without toilet of the peritoneum. ("Med. Record," June 11, 1887.)

Abscess in privesical space or Cavum Retzii.—Dr. Pinnar publishes an interesting case of this kind. A man at 45 who was believed to suffer from muscular rheumatism suddenly felt pain localized in the hypogastric region, which intensified during the following days ; palpation could not be tolerated. After thirteen days, fluctuation was distinctly observable in this region and the presence of pus was revealed by the aspirator needle. A free incision allowed the escape of pus, revealing at the same time the margin of the rectus muscle and an abscess cavity which was situated beneath the recti and in front of the bladder. The abscess was drained and washed out frequently, recovery being complete after a prolonged period.

In discussing this case and others that have been recorded, the author proceeds to describe the existence of two spaces in this region, viz., the *submuscular* space and the *prevesical* space ; he demonstrated the limits and connections of these spaces by injecting liquid plaster of paris through a cannula.

The *submuscular* space is bounded anteriorly by the rectus, posteriorly by the transverse fascia of Cooper, latterly by the margin of the sheath of the rectus, below by the symphysis. This space is incompletely divided into two parts by the linea alba.

The *prevesical* space is bounded anteriorly by the pubis, above by the transverse fascia, posteriorly by the bladder, and below by the pelvic fascia. To this space only should the term *Cavum Retzii* be applied.

After describing the subjective symptoms the following physical symptoms are mentioned as differentially diagnostic of abscess in the two spaces.

In the *submuscular* space the tumour has a shape resembling the rectus and may be bilateral. The apex is at the pubis and the tumour is manifestly connected with the rectus.

In the *prevesical* space, however, the tumour resembles somewhat the form of an overfull bladder; the apex is upwards and the recti can be moved in front of the tumour. The latter can also be felt by rectal examination.

The submuscular abscess usually bursts through the skin. The prevesical may open through the skin or into the abdominal cavity, the rectum, the bladder, or the vagina. The importance of diagnosing the two will at once be evident.

In each case exploration with the aspirator needle is desirable, and early evacuation absolutely necessary. ("Deut. Zutschrift f. Chir." B 23, H 556).

(See also *perineal abscess* under urethra, and *hepatic abscess* under liver).

ACIDITY. (See Dyspepsia).

ACNE. *N. Whitelaw Bourns, M.D.*

A very common disease, commencing about puberty, and not infrequently lasting during the active stage of hair growth; it is seldom encountered after the age of thirty. Different names have been applied to the disease according to its stage of development as *A. simplex*, *A. punctata* or *papulosa*, and *A. pustulosa*. Acne vulgaris is used when the disease is seen to exist in all its stages from the papule to the pustule, or even to the chronic inflammatory induration. Most cases of acne are benefited by treatment, but occasionally we meet with patients who resist all our efforts, and time alone effects a cure. In the treatment of acne the general health must be carefully attended to, and treated on general principles. Not infrequently the stomach will be found deranged, with a coated tongue, in such cases Duhring advises a morning aperient as

℞ Mag. Sulph.	℥ss.	Acid Sulph. dil.	℥ij
Ferri Sulph.	gr. xxvj.	Aq. Menth. pip.	℥viij

A tablespoonful in water to be taken every morning. (Diseases of the skin, p. 275).

If there is a tendency to the formation of pus, **Sulphide of Calcium** in ½ grain doses, thrice daily, will do most good.

In all cases of acne the local treatment is of the greatest importance, the first indication being to get rid of the sebaceous matter, and this we can accomplish, by hot bathing night and morning, followed by brisk friction with a rough towel, and by squeezing out the contents of the follicles between the thumb nails, into a watch key; or Volkmann's spoon, as modified by Auspitz, may be passed into the open mouth of the follicle, and its contents scooped out.

Some preparation of **Sulphur** is the drug most frequently employed, and with good results. M'Call Anderson recommends the following:

℞ Sulphuris | Cerati Galeni ℥j
Glycerini āā ℥j |
M. Fiat ung.

To be applied firmly every night, short of causing pain. Or one or two drachms of the **Hypochloride of Sulphur** may be used instead of the sulphur.

Bulkley uses the following lotion:

℞ Potassii sulphureti | Aquæ rosæ ℥iv
Zinci sulphatis āā ℥j | Ft. lotio.

Lassar has found good results from

℞ β Naphtholi 10·0 | Oder. lanolini puriss.
Sulph. præcip. 50·0 | Sapon virid. āā 25·0
Vaselini flavi. |
M. Leniter terendo fiat pasta.

To be spread over the part affected, and allowed to remain on fifteen or twenty minutes, then carefully wiped off with a soft cloth. Slight burning from inflammation of the skin follows. All forms of acne are said to be improved by this method of treatment. ("Monat. für Prakt. Derm.," vol. VI., no. 5).

Dr. Hardaway, of St. Louis, uses the following ointment in inflammation of the hair follicles within the nares:—

℞ Squire's Glycerol plumb. subacet. ℥ss | Ung. aq. rosæ ℥j
Glycerin ℥iss | Ceræ albæ q.s.

ACNE ROSACEA.

N. Whitelaw Bourns, M.D.

Is in a large proportion of cases due to some form of gastric disturbance, most marked in women at the menstrual periods, or at the menopause; in males it frequently shows itself at puberty. Both sexes suffer when constantly exposed to extremes of temperature; as is shown, on the one hand, by the frequency of the disease amongst coachmen, and on the other, by the fact that cooks and bakers are so often attacked.

TREATMENT.—The state of the digestion must first engage our

attention, and in women the uterine functions and bowels require careful consideration. Generous diet and tonics, especially **Arsenic** are necessary, locally some preparation of **Sulphur** as the **Hypochloride**, a drachm to the ounce, is frequently employed. In the early stage of the affliction, **Corrosive Sublimate**, one or two grains to the ounce, answers very well; or **Mercurial Plaster** spread on cloth may be applied; as recommended by Neumann and Hebra; or we may try an ointment, 10 to 15 per cent. of the **Oleate of Iron.** When the vessels are dilated division with a sharp knife, or obliteration by electrolysis as suggested by Dr. Hardaway, of St. Louis, may be called for.

When the disease has been allowed to run into the hypertrophic stage, removal with the knife is the only effectual treatment.

ACTINOMYCOSIS. *W. H. Elam, F.R.C.S.*

This disease has received a good deal of attention latterly, and much discussion has been excited as to the nature of its pathogenesis and the exact method of the introduction into the system of the disease germs.

Dr. Israel advanced the theory that the disease when found in the lungs does not result from inspiration of germs from the air, but aspiration of germs from the oral or adjacent cavities, especially disease of the antrum of Highmore, and he relates a case where a fragment of a tooth was found in an actinomycotic cavity in the lung.

Dr. Roser describes an acute and a chronic form of the disease.

The majority of the patients affected with the disease are cattle drivers.

Dr. Partsch ("Deutsche Zeitschrift für Chirurgie," Bd. 23, S. 498) describes eight new cases of this disease. In four instances the disease appeared about the lower jaw and in the neck. In three cases it assumed the form of "abdominal actinomycosis." These examples do not present any new features, nor do they differ from the now familiar descriptions of this malady. The eighth case, however, is very remarkable. In this instance the fungus developed in the scar left after extirpation of the breast. The patient was a man of sixty. In June, 1884, there was removed from his left breast an ulcerating carcinoma. The wound sloughed and showed little disposition to heal. Some skin, taken from a young man in sound health, was transplanted upon the wound. It was practically healed by September. In two months' time, however, the scar broke down and an abscess discharged itself. In the pus from this the actinomyces were discovered. All involved parts were excised, and the progress of the

disease apparently arrested. There is no clear evidence to show how the wound was infected.

It is stated that actinomycosis germs have been found in carious teeth. Amyloid degeneration of internal organs frequently accompanies the disease. Septic symptoms are not generally observed unless other bacteria, as well as the actinomycosis fungus be found in the secretions.

In actinomycotic abscesses the pus is small in amount, the fistulæ are tortuous and forked, the walls callous and thickened, and small yellow kernels are discoverable in the pus and fungous granulations.

In regard to treatment, free scraping with Volkmann's spoon, and the application of Paquelin's cautery to the diseased part, followed by the application of iodoform dressings, appears to be most successful. ("Centbl. f Chir.," No. 24, 1886; "Archiv. f Klin. Chir.," B. 24, H 1.)

AGUE (Intermittent and Remittent Fevers). *Alex. Collie, M.D.*

The treatment consists in the administration of **Sulphate of Quinine** or **Liq. Arsenicalis.** The former may be given in large doses before the paroxysm, say 20 to 30 grains, or in divided doses of 5 grains three times daily. When the stomach will not tolerate the drug, it may be given subcutaneously in a smaller dose of course, or by enema in a larger. It should be remembered, however, that subcutaneous injection is not "without risk of inconvenience from troublesome ulceration round the site of injection, if a mineral acid has been used to dissolve the quinine: this in urgent circumstances, such as in pernicious agues dangerous to life, or in remittents, might be disregarded were it not that tetanus followed the operation in five cases in one year in the Bengal Presidency, all of them proving fatal. In the face of such a fact, this operation, trivial as it seems, should not be performed on light grounds. The neutral sulphate of quinine, which dissolves freely in water at a temperature of 99° F., does not, so far as the writer's experience goes, cause ulceration. The syringe used for this purpose should be a little larger than that for operations with morphia, and should have a platinum hollow needle" (Maclean). The quinine and arsenic should be continued until some time after the disappearance of symptoms. In a form of malarial fever, designated "Pernicious Hæmorrhagic," Van Horn recommends the following:—"A mercurial purge: Quinine *at once* in doses of 10 to 20 grains every three hours until cinchonism is produced; then in 8 grain doses every four hours. For vomiting, a hypodermic injection of **Morphine, Bitartrate of Potassium** to assist the calomel and act as a diuretic and diaphoretic. Ten hours after the initial

chill, wrap the patient in a blanket, and put hot bricks around the body. If the chill threaten a return, give **Chloroform** internally, or **Morphine** and **Atropine** hypodermically. For hyperpyrexia, give quinine or antipyrin as a diuretic and hæmostatic; he also gives:—

℞ Ext. buchu fl., f℥iv | Potas. acetat., ℥jss
Ext. ergotæ fl., f℥ij | Aquæ, ad f℥vj
M. S.—f ℥j every two hours

until the urine clears up; then, less frequently. **Turpentine** may be applied over the kidneys. **Pilocarpine** or **Morphine** for uræmia, or **Chloral** and **Bromide of Potassium**. For cardiac failure, **Whisky, Ether** or **Atropine** hypodermically. The strength should be sustained by concentrated food."

AIR-EMBOLI. *W. H. Elam, F.R.C.S.*

Dr. N. Senn has made experimental research, and collected cases from clinical literature, upon the entrance of air into the veins, either from accidental wounds or during operations. Air can only be sucked into those wounded veins which are subject to the venous pulse, *e.g.*, axillary, jugular, &c.; but exceptional cases have been recorded where the air entered the facial vein and the superior longitudinal sinus in the skull. Very forced inspiratory efforts might cause the entrance of air into veins far removed from the heart. It has been experimentally proved that air could only enter the superior longitudinal sinus when the head is elevated, and when the pressure of blood in the sinus is less than the air external pressure. In wounds of this sinus air could not be sucked in if the head be kept low. The physical signs observed at the autopsy in cases of death from air-emboli are emptiness of the left ventricle, great distension of the right ventricle, and the presence of air bubbles in the pulmonary arteries, and even in arteries of the limbs.

The immediate causes of a fatal end are (α) paralysis of the heart due to the inability of the right side of the heart to overcome the pressure of the air in the pulmonary arteries, and (β) asphyxia, the result of the obstructed passage of the blood in the lung capillaries. If the air pressure be less than 1 *c.c.m. per kilogram* of body weight the right ventricle is capable of overcoming it (in dogs). In such a case the air extends throughout the circulation and is absorbed.

It is probably of some importance to form an opinion as to what direction in the circulation the air is being forced. When the air enters the carotid, convulsions, tetanic opisthotonos and coma result. When air enters a vein, wounded by accident or intentionally, the diagnosis of the fact would probably be impossible, as the patient is

not seen until some time has elapsed. During an operation if air enters a vein air bubbles are seen in the wound, followed by syncope, blueness of the lips, tumultuous action of the heart, rapidly succeeded by complete stoppage of the same.

For treatment, inhalation of **Nitrite of Amyl** is perhaps the best. Of course means will be taken to prevent further entrance of air, *e.g.*, plugging of the wound, &c.

Dr. Senn has proved by experiments upon animals that life may be saved by puncturing the right ventricle with a trocar of about 2 mm. in diameter, and allowing air and blood to escape therefrom. In other cases life was saved by catheterising the right side of the heart through the right jugular vein. In puncturing the ventricle the trocar should be introduced through the fourth intercostal space, 1 cm. to the left of the sternum.

To prevent entrance of air into the veins during an operation, the recumbent position must be maintained, and the operation only proceeded with under deep narcosis if in a dangerous locality. (Deut. Zutschft f. Chirg., B 25, H 3).

AIR PASSAGES, (Therapeutics of). *Prosser James, M.D.*

The methods of treating the diseases of the respiratory mucous membrane have always occupied attention, but since the upper air passages have been explored by the laryngoscope, the tendency to local medication has received an extraordinary stimulus. Nevertheless very able observers are inclined to think that topical treatment has often been abused, or at least, that older methods have been unwarrantably neglected. Lately the nasal passages have received more attention than the larynx at the hands of specialists, and we are almost threatened with a new specialty of rhinology, which, however, is chiefly occupied by laryngologists. These remarks are well illustrated by a series of papers read last April at the New York Academy, of which there appears to be a section of laryngology and rhinology. We can only indicate the drift of these papers.

Dr. Bosworth called in question most of the means which have been held to be useful. Thus, as to the larynx he said, whatever may be the comparative uses of topical applications, a question of more importance is : Did any of them ever do any good? He roundly asserted that no case of chronic laryngitis was ever cured by them, from which it is clear he is in opposition to the statements of nearly all other laryngologists. Either all their practice has been useless, or Dr. Bosworth is a little too sweeping. He is so impressed with the importance of nasal affections that he declares chronic laryngitis to

be a mere symptom of such disease. The lower pharynx, he says, not being a part of the air tract, has been uselessly plied with treatment for an imaginary pharyngitis, while naso-pharyngeal catarrh, as described by Mackenzie, is a myth. He holds that nasal catarrh is only the result of those morbid states of the membrane which interfere with nasal exosmosis of serum, and that catarrh of the pharynx, larynx and trachea are secondary to this, and therefore only to be treated in the nose. Inhalations he repudiates, but admits that douches and sprays are of service, but radical treatment requires the restoration of the nasal passages to a normal condition by knife, saw, snare and caustic. As to the last, he prefers **Chromic Acid** if it be carefully and properly applied, and thinks it will do all that the vaunted galvano-cautery can. Obviously Dr. Bosworth's tendency is surgical, and in this he follows Dr. Daly and others.

Dr. Andrew H. Smith in the course of some cogent statements, submitted that chronic inflammation in other localities proved an opprobrium to other specialists, and therefore we need not adopt extreme views. He found in the report of a large clinic, seventeen hundred and seventy-three cases, of which thirteen hundred and fifty-one were non-specific chronic disease. Only 27 per cent. of these required operative measures, so that 73 per cent. were treated otherwise. When surgery has done all it can, we have 73 per cent. of our cases to attend to. This as to chronic cases. In acute and sub-acute ones he had no doubt of the sufficiency of topical applications, which may therefore claim a fair trial in chronic conditions.

Dr. W. H. Thomson, considered the treatment should be directed by two principles ; (1,) taking cognizance of cutaneous nerve-associations in the causation and perpetuation of inflammation of mucous membranes ; (2,) local disinfection. As to the first point, a *local* surface chill was credited with frequent causation and protective clothing urged. Flannel sheets, and perforated buckskin vests with long sleeves were recommended. As to the second point, we need to strengthen the resisting power of the tissues and to improve our disinfectant methods and discover new agents. At present the carbolic series are most extensively used, but not universally the best.

Dr. H. Holbrook Curtis, professed to have enlarged the nasal passages in more than a thousand cases. He restores the normal opening by applying **Chromic Acid** to the hypertrophies, and removes cartilaginous or bony obstructions by surgical measures. He uses sprays as adjuncts to this treatment. A granular condition of the posterior pharynx he regards as due only to mouth breathing, and to

be cured by restoring the nasal passage. He does not believe chronic post-nasal catarrh exists without nasal stenosis. Disease of the ethmoid cells is generally due to hypertrophy of the middle turbinated bone. In all non-specific and non-tubercular affections of the larynx he enlarges the narrowed nasal passages, and would not exchange a flat probe and chromic acid for all other methods combined. With care no bad results need occur.

Dr. William Chapman Jarvis, while acknowledging the proper use of sprays as valuable, held that the majority of catarrhal processes were due to nasal obstructions, and its natural results — impeded respiration and disturbance to nasal drainage. He had no doubt that **Chromic Acid** was the best caustic, but if too often applied it gave rise to trouble, and he had known it set up severe inflammation, extending to the post-nasal structures, with œdema of soft palate, etc. He could not understand, therefore, why it should be persisted in to remove small hypertrophies, when it is always possible to transfix the redundant tissue, and remove it with the snare-écraseur in a few minutes, without any after ill-effects.

Some of the views above reported naturally excited opposition, and in the "N. Y. Medical Record," Dr. Kitchen vigorously attacked them as "laryngological heresy." He declared that any one not making a *successful* use of topical medication must be lacking in skill, or not doing his duty to his patient; that serious diseases may be cured by skilfully made applications; that nasal stenosis is not the sole cause of disease of the pharynx, larynx, or trachea; that **Chromic Acid** is not the best agent and requires the utmost skill for its safe use; that many applications prove useless because they are not skilfully made, and that to obtain the best results *special* knowledge, skill and experience are required. Not only many specialists but certainly general practitioners will endorse these statements.

ALBUMINURIA.

Robert Saundby, M.D., F.R.C.P.

The most interesting contributions during the year to the general pathology of albuminuria have been Dr. Grainger Stewart's papers on the incidence of albuminuria in healthy and diseased persons.

The occurrence of albuminuria in healthy persons had been previously described by Leube and Fürbinger, and Mahomed observed it after bathing. Dr. Stewart believes it to be present in as many as 30 per cent. of the community, that it is increased by breakfast and by excessive exertion, though moderate exercise diminishes it. This last statement is doubtfully correct, as the simple change from the

recumbent to the erect posture may cause albuminuria to appear. He also says it increases in frequency as life advances, and to this we must take exception, functional albuminuria being in the experience of most observers a condition met with almost exclusively in early life. Dr. Stewart naturally concludes that the existence of albuminuria is not *per se* a sufficient ground for the rejection of a proposal for life insurance ; but we must warn our readers that all or nearly all insurance offices at present refuse to accept such lives.

In sick persons Dr. Stewart's researches have been very numerous, and the facts obtained are valuable. He found albumen only in 40 per cent. of the whole, a much smaller number than might be expected when we remember the high rate amongst the healthy. The paper is too long to quote, but the lesson to be learnt is that we must give up entirely the now thoroughly exploded notion that albuminuria necessarily indicates organic disease of the kidneys. (Stewart, "Brit. Med. Journal," Oct. 15th, 1887).

The subject of *peptonuria* has received some attention, but is not at present of any practical importance, except for the fact that some of the new fangled tests give the albumen reaction with this substance, and so may lead to mistakes which are all the more serious in the case of those who still adhere to the old doctrine of the diagnostic significance of albuminuria.

The best way to test for albumen is to fill a test tube two-thirds full of urine, which must be clear, and should be filtered if necessary, boil the upper half, and then add a few drops of **dilute Acetic Acid**, boiling again for a few seconds. Then hold the tube against a dark back-ground with the light falling from above. If a trace of albumen be present, the upper stratum is plainly seen to be opalescent when contrasted with the lower one.

Bedside urine testing is very likely to lead to mistakes. Urine testing must be done carefully, and under conditions likely to secure accurate results, which cannot be obtained by the bedside.

Functional Albuminuria.—The pathology of functional albuminuria has been enriched by a suggestion from Dr. C. H. Ralfe, that it is due to excessive breaking down of the red blood corpuscles. This is supported by three cases in which attacks of paroxysmal hæmo-globinuria supervened upon a state of persistent albuminuria. This view illustrates anew the doctrine of the hepatic origin of certain forms of albuminuria, which the late Dr. Murchison advocated. (Ralfe, "Brit. Med. Journal," Nov. 27th, 1886).

Treatment of Albuminuria.—The present writer instituted an enquiry

into the effects of drugs to control the excretion of albumen. His conclusions were that we possess no drug which has any very definite power over this symptom, a result which is in agreement with those of Roberts and Rosenstein. The drugs experimented with included alkalies, tannate of soda, tannic acid, ergot, turpentine, fuchsin, anti-hydropin, cantharides, iron, acetate of lead, alum, and the bichloride of mercury. Heart tonics, such as digitalis and strophanthus seemed to increase the albumen; this was also the case with iron. He pointed out that in mild cases of acute Bright's disease, the albumen tends to diminish and disappear independently of drugs, which may account for much of the apparent success following the use of drugs, while in functional albuminuria, which often persists for years, and in which drugs should operate to most advantage, he failed to find a remedy which could exercise any control over the loss of albumen. (Saundby, "Brit. Med. Journal," Nov. 27th, 1886).

ALCOHOLISM.

The general treatment of affections produced by the excessive use of alcohol was fully considered in the "Dictionary of New Treatment," 1887, p. 7.

During the stage of Intoxication: The sub-cutaneous injection of **Pilocarpine** (⅓ gr.) has been recommended; **Caffeine, Cola Nut,** and strong **Coffee** may be given as antidotes.

The Gastric Catarrh of Alcoholism is remedied by the use of the oxides of **Silver, Zinc,** or **Bismuth**; or small doses of **Arsenic** and **Nux Vomica,** the latter remedies being of great value in controlling the morning vomiting.

The Mania of Acute Alcoholism: **Hyoscyamus** is one of the best sedatives in this condition. Dr. Lardier recommends the hypodermic injection of **Strychnine** ($\frac{1}{15}$ gr. every 2 hours).

ALOPECIA. *N. Whitelaw Bourns, M.D.*

Described by M'Call Anderson as *congenital alopecia: alopecia senilis; alopecia simplex;* and *alopecia areata.*

The first three varieties being of little importance to us, we at once pass on to the consideration of areata. This affection was long thought to owe its origin to a parasite (*Microsporon Andonini*), and some authorities still lean to the same view, but a neurotic origin of the affection is now more generally accepted.

Dr. Thin has found some bodies closely resembling bacteria in the hair sheath, he therefore uses the term "Bacterium Decalvans."

In Professor Du Bois-Reymond's Physiological Institute at Berlin, experiments on cats showed that division of the spinal ganglion of

the second cervical nerve, in every case was followed by patches of alopecia, and therefore the disease was looked upon as a tropho-neurosis of the skin. ("Monat. für prac. Dermat." Nov. 1886).

TREATMENT.—Internally, tonics are usually called for, as **Arsenic, Cod Liver Oil, Quinine,** and **Iron.** Locally, stimulating applications to be rubbed in night and morning, as preparations of **Cantharides, Carbolic Acid, Alcohol, Salts of Mercury** and **Sulphur,** etc., etc.

Bulkley says, injections under the skin of the **Nitrate of Pilocarpin,** $\frac{1}{10}$th of a grain every few days, will sometimes act wonderfully well. ("Diseases of the Skin," p. 242.)

Vigier advises the following, the proportions are given by weight:

℞ Alcohol (80°) ʒxx	Essence of Santal, Winter-green, Laurel Roses āā gtt v
Camphorated Alcohol, Rum, Tincture of Cantharides, Glycerine āā ʒiv	Muriate of Pilocarpine gr. viij

To be gently rubbed in once daily.

("Revue de Theraputique," May 15.)

From some experience, we can strongly recommend a lotion of **Sulphurous Acid** of increasing strength up to the undiluted acid, applied night and morning.

AMENORRHŒA. *John W. Taylor, F.R.C.S.*

Usually consequent to mental overstrain, anæmia, or other general impairment of health as in early phthisis. It is often due to pregnancy, occasionally to chill, and is only very rarely due to mechanical obstruction or malformation.

TREATMENT.—**Iron and Permanganate of Potash** (gr. j. to ij. t.d.s.), or **Peroxide of Manganese** (gr. ij. t.d.s.), are the staple remedies most satisfactory in their action (see *anæmia*).

In acute arrest from chill, where there is some pyrexia, **Aconite** (Tr. ♏j.) every hour.

In chronic arrest, where there is congestive frontal headache, increasing doses of **Iodide of Potassium** (grs. v. to xv., t.d.s.), and **Saline Purgatives** (mist. alba.)

In strumous subjects, **Cod Liver Oil** and **Parrish's Food.**

In cases of mental overstrain, *mental rest* and *change of air.* **Pulsatilla** (Tr. ♏iv. t.d.s.), **Santonin** (grs. ij), **Apiol** and **Sanguinuaria** have also been largely recommended (see "Annual," 1887).

ANÆMIA (Syn. "Chlorosis.") *John W. Taylor, F.R.C.S.*

Fourfold treatment required :—

1. *Aperients*—see Constipation.

2. *Iron.* The most usually successful method of administration being in the form of "Blaud's Pills:"—

℞ Ferri Sulph.	gr. 2½	Sacchari	gr. 1
Pot. Carb.	gr. 1½	Tragacanth	gr. ⅙

Ft. pil. j. Two pills three times a day after meals.

3. *Regulation of Dress.*

Every constriction or compression of chest or abdomen to be absolutely forbidden. Therefore stays to be discarded and each skirt to be united with or fastened to a bodice so that the weight is borne by the shoulders and not by the waist.

4. *Regular out-of-door exercise.*

Deep and full respiratory effort to be encouraged as an important form of "exercise."

Rebellious and inveterate cases may be due to—

(*a*) Fæcal accumulation : Treatment, **Enemata.**

(*b*) Lead poisoning : Treatment, **Iodide of Potassium** and **Purgative Salts** ("*Mist. Alba.*")

(*c*) Syphilis : Treatment, **Mercury** in small doses.

(*d*) Tape-worm : Treatment, **Filix Mas.**

(*e*) Pernicious Anæmia : Treatment, **Arsenic** in increasing doses Liq. Arsen. ♏iij to ♏xv.

ANÆSTHETICS (in Gynæcology). *John W. Taylor, F.R.C.S.*

The anæsthetic used in almost all cases at the Birmingham Hospital for women is a mixture of pure methylated **Ether** (2 parts) and **Chloroform** (1 part.) This is given in a **Clover's Inhaler.** After prolonged experience and experiment this method is considered by the hospital staff to be the most satisfactory and is only very rarely departed from. In bronchitic cases, when ether is considered to be contra-indicated, pure chloroform is occasionally administered.

ANÆSTHETICS (in Surgery). *W. H. Elam, F.R.C.S.*

It might have been thought that the question of the best anæsthetic had now been settled beyond doubt ; recent investigations and observations have, however, shown that **Ether** is not just the perfect anæsthetic it was believed to be. Many who have had opportunities for observing the effects of ether are now agreed that it should never be given in cases of kidney disease.

Dr. H. B. Mallard believes the ether in these cases to be productive of a double source of danger, viz., (1,) the production of paralysis of the renal nerves and their terminal filaments, leading to passive congestion or inflammation of the renal vessels, glomeruli, &c. (2,) the impossibility of the kidneys eliminating the ether, and its con-

sequent retention in the system. He believes **Chloroform** to be much safer in these cases. ("N. York Med. Record," 29th January, 1887).

Dr. A. G. Gerster says the presence of albumen or casts in the urine is a positive contra-indication to the use of ether, and a direct indication for the use of chloroform.

In chronic catarrhal affections of the bronchi of the aged, ether often favours or causes the development of catarrhal pneumonia.

The profuse secretion and inspiration of the saliva into the respiratory passages would appear to be one of the causes of such pneumonia. The cold fumes of the ether appear to blunt the sensibility of the bronchial mucous membrane to such an extent that the entrance and presence of well vomited matter does not excite sufficient reflex action for expulsion of such matters by coughing. In cases where complete relaxation is desired to be obtained, or when it is desired to obtain tranquil respiratory movements, and freedom from sickness and straining, as in abdominal surgery, ether is not the anæsthetic to be selected. The contra-indications to **Chloroform** are (*α*) fatty degeneration, (*β*) great anæmia, (*γ*) nervous influences. ("New York Med. Record," April 23, 1887).

Dr. F. Hewitt, of the London Hospital, says that for the majority of cases there can be no doubt **Ether**, preceded by **Nitrous Oxide**, is the safest anæsthetic. The preliminary administration of the nitrous oxide is especially to be recommended with muscular, alcoholic or nervous people. Atmospheric air should be rigidly excluded during the inhalation of the nitrous oxide, and ether should be gradually and increasingly admitted when the signs of nitrous oxide narcosis begin to appear. Vomiting during the administration is usually to be prevented by rapidly and thoroughly anæsthetizing the patient. Deep narcosis having been once established reflex acts should be carefully watched, for amongst these deglutition is often an important indicator of incipient coughing or vomiting, and if it occur the administration should be pushed. In obstructive dyspnœa an anæsthetic should be given—if at all—most carefully.

The sedative effects which opium or morphine exert upon the respiratory system contra-indicate their employment in cases in which respiratory embarrassment would be likely to occur.

Mr. Horsley recommends that hypodermic injections of **Morphia** be given when an operation upon the brain is contemplated, in order to lessen the amount of capillary hæmorrhage, and in his cases no inconvenience has been observed.

Dr. Hewitt, however, mentions a case of operation on the brain,

the patient dying after artificial respiration had been practised for four hours, from complete failure of automatic respiration, which he believed to be due to the hypodermic injection of morphia. ("Annals of Surgery," Sept., 1881).

The only local anæsthetic calling for remark is **Cocaine**. A very extended use of it has been observed, viz., for amputation of breast, amputation of finger, &c. (*See also Dictionary of New Remedies*).

The writer has removed a lipoma the size of a hen's egg, an adenoma from the breast, a neuroma from the median nerve, and several small tumours in various parts of the body, the patient being entirely unconscious of pain. The plan adopted is to inject a 10 % solution under the skin in several places around the tumour or part to be ablated. Beyond a little faintness no unfavourable symptoms have been observed.

It may be concluded, then, that in cases of kidney disease, and with children, chloroform is the safer anæsthetic. In cases also where it is desirable to avoid sickness, *e.g.*, abdominal surgery, chloroform or methyline is better. For small operations cocaine is sufficient.

ANEURISM.

There have been no important contributions during the year bearing on the medical or surgical treatment of this affection, which was fully considered in the "Dictionary of New Treatment," (MEDICAL ANNUAL), 1887, p. 19.

ANGINA PECTORIS. (See also Heart, Neurosal affections of).

To prevent the attacks: **Arsenic** and **Phosphorus** have proved valuable.

During the attack: **Nitrite of Amyl, Nitrite of Sodium, Nitro-Glycerine, Bromide of Ethyl,** and **Cocaine** are employed. (See "Dict. of New Treatment," MEDICAL ANNUAL, 1887, p. 23).

ANO, Fistula in. See Fistula.

ANTISEPTICS. (See "Disinfectants," also "Dictionary of New Remedies," articles: *Amykos, Bismuth-Sub-Iodide, Eugenol, Formic Acid, Iodol*, and *Disinfectants*, p. 46).

ANUS, Fissure of. (See Fissure).

APOPLEXY. *Robert Jones, M.D.*

Taking the term in its widest and etymological meaning to signify a sudden loss of consciousness and power of motion, its treatment depends upon the various causes: (*a*) the influence of blood poisons such as alcohol, narcotics, acetone, urea; (*b*) the cerebral lesions due to extravasations of blood from ruptured blood vessels, external

injury, thrombosis, embolism, and cerebral congestion; (*c*) less frequently concussion, epileptic fits, and the indistinct and less recognised causes operating in many cases of general paralysis of the insane. The rational treatment resolves itself into seeking for the cause, and in many cases where no guide can be obtained, and no indication beyond rigid arteries, or a hypertrophied left ventricle as a factor in renal disease exist, the general treatment should be based upon that for cerebral hæmorrhage, which indeed is the commonest cause. In all cases quietude is the most essential element, the patient should rest in the recumbent position with the head slightly raised, the neck and chest free and unrestrained; if the pulse be full and firm, indicating high arterial pressure, and the heart's action be strong, venesection and purgatives may be resorted to. Venesection can be done in two ways, either as a derivative bleeding from the arm or by cupping, the effect being proportioned to the rapidity with which the blood is withdrawn rather than to the quantity withdrawn. As to purgatives **Calomel** (grs. iij. to iv), mixed in a little jelly and placed upon the tongue, or **Croton Oil** (♏j to ij), administered in a like manner, act most satisfactorily, by removing the serum from the blood and lessening the amount of blood within the head, causing an afflux to the capacious intestinal vessels. If the face be flushed and the temperature raised, ice to the head is indicated; on the other hand, if the heart fail and the body heat be low a judicious administration of stimulants and ammonia should be resorted to. Sinapisms help to arouse consciousness and act as mild counter irritants; they should be applied to the back of the neck or extremities. **Aconite or Veratrum Viride** (Tinct. 2 to 5 minims) is also useful in lowering the blood pressure. No depressant should be given when there is paleness and coldness of the surface and a failing heart. Due attention should be given to the prevention of bed sores, and cystitis from retention of urine rigidly avoided by frequent and careful catherization. Of all forms of disease apoplexy is the one that bears out most strongly the aphorism, that prevention is better than cure; only in a recent article Dr. Robert Barnes calls attention to the neglect of blood-letting, as applied to the illness of Sir Wm. Gull, when after several premonitory hæmorrhages in the form of hæmoptysis, epistaxis, and transient hæmaturia, it was feared that the brain lesion had not escaped a similar cause.

ASTHMA. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

The morbid process in this disease has been attributed to (1) spasm of the diaphragm with or without associated spasm of the ordinary muscles of respiration; (2) tumefaction or swelling of an urticaria-like

nature of the bronchial mucous membrane ; (3,) spasm of the bronchial muscular fibres. Prof. Fraser, in the paper more fully alluded to below considers that the criticisms of Biérmer and others have disposed of the first hypothesis ; the second, chiefly upheld by Sir Andrew Clark and Weber, is contradicted by the results obtained from the use of the nitrites advocated by Fraser, for tumefaction of the mucous membrane implies dilatation of the vessels, if then this were the cause of the disease, the administration of the nitrites, causing as they undoubtedly do, dilatation of vessels, should aggravate, instead of relieving the spasm. The third theory remains, and the property of contraction on irritation possessed by the bronchial muscles is well known to physiologists.

In by far the largest proportion of cases the origin of the spasm is reflex; the exciting cause should therefore always be sought for, but its discovery, especially after the asthma has existed for some time, is often a matter of great or even insuperable difficulty. In a few cases the disease seems to be idiopathic or a true neurosis, but future investigations may be expected to bring to light reflex causes at present unsuspected. Hack's discovery that asthma may be caused by a nasal polypus or by swelling and hypertrophy of the lower turbinated bones excited general interest, and for a time his enthusiastic followers were inclined to attribute most cases of asthma to this cause, and the lower turbinated bones were cauterized in some way or other on the slightest evidence or suspicion of a morbid process in them. Recently, and this is remarkably emphasized by an important discussion which took place at the Berlin Medical Society during the past year, more extended experience and observation have shown that this cause of asthma is comparatively rare, certainly not more than 7 per cent. of cases owing their origin to it. Of course, if any lesion of the kind were found in a patient suffering from asthma it should be efficiently treated.

Asthma is generally in our climate more or less complicated with emphysema and chronic bronchitis, not rarely with some form of cardiac lesion, while, when it has existed for some time, the disease itself produces well known secondary morbid changes in the lungs and heart.

Prof. Fraser in an important series of observations details the value of the **Nitrites** as a remedy of asthma, and if his results are fully confirmed, their administration will become our most valued resource. He found that in pithed frogs when the nitrites were made to circulate in a saline solution, general dilatation of the arteries was produced, so that the nitrites cause, apart from any remote action, dilatation of

vessels as a direct effect of contact with their walls. Contact with the walls of the bronchi would presumably act in the same way, and he found that inhaling nitrite of amyl at once relieved the spasm in asthmatic patients; the result of inhalation, however, soon passed off, and the spasm returned. By administering the nitrites by the stomach, the spasm was relieved in from one-and-a-half to three minutes, and the effect maintained for some hours, the patient being quite comfortable, and the auscultatory phenomena heard during the paroxysm disappearing. By arranging the doses so that a fresh one was taken when the effect of the previous one was passing off the benefit was maintained. At the same time the high tension of the pulse was lowered. We may expect then to relieve an asthmatic patient by these remedies, and with more certainty whenever there is a state of high tension of the pulse. The nitrites may be administered by the stomach in the form of **Nitrite of Amyl, Nitro-Glycerine,** or **Nitrite of Sodium.** The two latter are preferable, and the effect of nitrite of sodium is the most lasting, and is less likely to give rise to headache.

Nitro-Glycerine may be given in doses of 1 minim of 1 per cent. solution gradually increased to 4 minims or more, and **Nitrite of Sodium** in doses of 2 to 5 grains in water.

The most generally useful remedy in asthma is **Iodide of Potassium,** it should be administered in 5-grain doses, four to be taken at intervals of four hours in the period preceding the hour at which the asthmatic attacks come on or are at their worst. It may be advantageously combined with $\frac{1}{8}$ to $\frac{1}{4}$ grain of **Extract of Stramonium,** as in the Brompton Hospital mixture, given as above until dilatation of the pupil occurs, and then keeping up the effect by less frequent administration. Herr Lazarus recommends a combination of **Chloral** with the iodide. In any case it is important that the attacks should be cut short as soon as possible, and in the early stages of severe asthma when the nights are much disturbed, a draught of chloral and bromide with morphia, if necessary, at bedtime, gives much relief and ensures sleep. Prof. Da Costa has given with success $\frac{1}{4}$ grain of **Cocaine** ter in die, and **Hyoscyamine** in doses of $\frac{1}{130}$ grain has been lately recommended. Of the fuming inhalations Himrod's patent asthma cure is the most efficacious, its probable formula is given by Martindale. Sir James Sawyer finds that a powder of potass. nitrat. ʒss., Pulv. Anisi. Tinct. ʒss. and Pulv. Stramonii fol. ʒj. gives prompt relief. About a thimbleful placed on a plate is pinched into a conical heap, lighted at the top, and the fumes inhaled.

Prof. Fraser gives a table from which it appears that the efficacy of

these inhalations varies directly according to the proportion of nitrites and nitrates contained; another base found as a product of their decomposition is **Pyridine**, and this is strongly recommended by M. Germain Sée as an almost certain palliative in asthma. Pyridine is a very volatile liquid, with a most intense and penetrating odour. It is best administered by pouring out a teaspoonful in a saucer, and letting the patient inhale the fumes from a little distance for twenty to thirty minutes three times daily, or when the paroxysm begins. We have found pyridine give relief to a large number of patients; unfortunately, its very penetrating and disagreeable smell makes many of them decline to use it. (See "Dict. of New Remedies," p. 85).

With the doubtful exception of pyridine all inhalations are in the long run hurtful, as Dr. Broadbent in his paper "On the Remote Action of Remedies" pointed out some little time ago, and should never be continued longer than is absolutely necessary, nor used when relief can be obtained by other measures.

Obvious objections apply to the continued use of **Morphia**, which, however, will always give relief for a certain time after every dose. **Arsenic** is of great value, especially in the after treatment to complete the cure, or when the first violence of the attack has passed off. It is perhaps more especially of service when asthma is accompanied or aggravated by disorders of digestion; and then may be given in combination with **Potass Iodide** in an alkaline mixture after meals. When the asthma is associated with purulent bronchitis, with coryza, or in cases attended with much weakness, arsenic gives good results, and speaking generally, it may be classed next to iodide of potassium in usefulness. **Lobelia** is also a well-known remedy and may be given in doses of 10 to 20 minims of the ethereal tincture three times a day, or at short intervals immediately before the paroxysm is expected. Its effects should be carefully watched, and it should not be administered when there is heart disease. **Caffeine**, besides its uses under special conditions given below, is often exhibited with success in uncomplicated asthma. Euphorbia pilulifera, quebracho, and grindelia robusta have been recommended, the two former by M. Germain Sée, but there has not as yet been sufficient experience of their action to justify a decided opinion as to their value. (See also "Dictionary of New Remedies.")

In cardiac asthma, in asthma with heart failure secondary to the obstruction to the passage of the blood through the lungs, **Caffeine** and **Digitalis** may be combined with other remedies with advantage. Sometimes when digitalis does not relieve the labouring heart nor in-

crease the urinary secretion, caffeine does both in a remarkable way, but it is difficult to lay down precise rules as to which remedy to select. We have lately found, both in these cases, and in cases of pure asthma, **Sparteine** efficacious; besides its stimulating and strengthening action on the heart, it probably gives benefit by increasing the depth and frequency of the respiratory movements, and at the same time regulating them. It should be administered in $\frac{1}{16}$ to $\frac{1}{2}$ grain doses every four hours, and is very efficacious in combination with potass. iodide. We have observed several cases in which this combination was decidedly more effective than either sparteine or iodine alone. In cases where the heart's action is feeble, **Arsenic** and **Iron** act well given with one of the preceding drugs. Lastly, in cases attended with bronchitis, treatment must often be directed primarily, mainly to aiding expectoration and freeing the bronchi from the contained secretions. If the bronchitis is an acute attack, or an exacerbation in a chronic case, steam-inhalations containing benzoin or eucalyptus give most relief at first. In purulent bronchitis pure **Terebene** and the **Balsams** are frequently of much benefit.

BALANITIS.

In the acute stage, the inflamed parts should be painted with a solution of **Nitrate of Silver** (10 grs. to ʒj.), or if owing to phimosis, they cannot be reached, a solution of half the strength may be injected under the foreskin by means of a syringe. The inflamed surface should be kept apart by means of a thin piece of rag soaked in **Carbolic Oil** (1-30).

In sub-acute cases, a dusting powder is frequently very effective, and answers better than lotions or ointments. **Sulphate of Zinc, Calomel,** or **Sulphide of Calcium** may be employed in this way, with **Starch Powder** as a vehicle.

The indication is to keep the surfaces from contact, and use a mild astringent, and antiseptic application.

BALDNESS. (See Alopecia).

To promote the growth of the hair, the **Liniment of Ammonia,** or **Compound Camphor Liniment** (B.P.), were recommended by Sir Erasmus Wilson. Hebra uses **Tincture of Mace** (1 part), **Olive Oil** (10 parts).

BILIOUSNESS. (See Dyspepsia and Liver, Functional disorders of).

BLADDER (Intra-peritoneal rupture of) *A. W. Mayo Robson, F.R.C.S.*

Symptoms are similar to those mentioned under the heading of "*abdominal injuries.*" Shock which is very variable, may be serious from

the time of accident or may not come on for some hours. On passing a catheter, either none or a very little blood-stained urine is drawn off, unless the catheter pass through the rent, when, although urine flows, the end of the catheter can be felt to move freely in the abdominal cavity. There may be signs of fluid in the peritoneum from the first, but this is not to be relied on as an early symptom. There is usually a frequent desire to micturate. Pain is a very variable symptom, it may be absent or very severe. Treatment by laparotomy, suture of rent in the bladder by Lembert's sutures, and cleansing of peritoneum. Any other treatment holds out no hope.

The earlier the operation is undertaken the better the chance of cure. See report of two successful cases by Sir W. MacCormack, in "Lancet," 1886, ii., p. 1118; successful case of Mr. Walsham's, "Lancet," March 12th, 1887; Report of case by Mr. J. P. Teale, "Lancet," 1887. p. 1133; of 16 cases collated by Sir W. MacCormack six recovered, see his "Monograph on Abdominal Section;" "Discussion on Pathology of Ruptured Bladder," at Pathological Society, see Report in "Lancet," Feb. 5th, 1887.

The bladder has been wounded on several occasions in removing abdominal tumours, but immediate suture has usually prevented ill results; see report of Hysterectomy, "Brit. Med. Journal," Oct. 22nd, 1887, p. 878.

As regards sutures, thin asepticised silk is the best material; and care must be taken to avoid including the mucous membrane in the sutures.

BLADDER (Tumours of). *W. H. Elam, F.R.C.S.*

The recently recognised frequency of tumours of the bladder adduces evidence of the importance of a full knowledge of this subject, both in regard to the kind of tumour found, the differential diagnosis, and the best methods of treatment where operative treatment is demanded and justifiable. The neoplasm may take origin in any one of the structures forming the bladder, viz., mucous, submucous, muscular tissue, or epithelium; or it may take origin in the prostate, as an adeno-fibroma, myoma, or carcinoma, and extend into the bladder.

The papillomata, or fibro-papillomata, are the most frequent of all the neoplasms, and on account of the possibility of removing these, the most important to the surgeon. These papillomata, for some unexplained reason, are much more frequent in males than females. Their location is about the fundus, the trigone, the mouths of the ureters and the lateral walls of the bladder. The first symptoms are

usually hæmaturia ; the blood is unmixed with urine, *i.e.*, the urine is passed at first usually clear, and towards the end of micturition blood is passed, pure and unmixed with urine. The hæmorrhage comes on without known cause, and is unaccompanied by pain or irritation of the bladder. Perhaps there may be no recurrence of the hæmorrhage for some weeks or months, then recurrence takes place with ever increasing frequency. No pain is experienced, unless obstruction to micturition occur, either from the growth blocking up the opening of the urethra, or from obstruction by clot. After a time frequent micturition occurs, without, or with pain ; hæmorrhage is frequent or even continuous, and finally cystitis is developed. The most reliable symptom is that of hæmorrhage caused by simple catheterisation ; such hæmorrhage being usually profuse and lasting. In regard to the diagnosis it is first necessary to consider the other possible sources of the bleeding. The kidney in this respect stands first. In hæmaturia of renal origin, the kidney, Professor Guyon asserts, is usually enlarged. The enlargement of the kidney may be made out by palpation, and (in cases in which there have not been any inflammatory and adhesive changes in the peri-nephritic structure) by a manipulation called *ballottement rénal*, one of the surgeon's hands being applied to the anterior abdominal wall over the suspected organ, and the other in the corresponding costo-iliac space, and the kidney being driven forwards by pressure suddenly exerted in the latter region. Renal hæmaturia is preceded by renal colic and accompanied by the expulsion with the urine of small cylindrical clots. Varicocele is also a very frequent accompaniment of renal hæmaturia.

Then again, the condition of the bladder may be investigated by means of rectal examination ; and palpation, between the finger in the rectum and the hand over the anterior wall of the bladder. Sir H. Thompson, in cases of papillomata, usually finds it easy to obtain a small piece of the growth for microscopic examination, by washing out the bladder ; sometimes, however, he has required to wash out the bladder on six separate occasions before being successful. Küster's instrument, being a catheter, having a sharp-edged, oval opening on its convex side, for bringing away portions of the neoplasm, is useful. Sometimes endoscopic examination of the bladder will reveal the condition of this organ. To diagnose a benign from a malignant neoplasm, it is of importance to consider the history ; pain is, perhaps, the most important symptom, as this is usually marked from the first, especially in carcinoma, at least there is a history of

bladder trouble before the occurrence of hæmorrhage, whilst in benign growths, hæmorrhage is usually the first symptom. This is of importance in regard to treatment for considering the certainty of recurrence of the disease in malignant cases, the removal of it would scarcely be justifiable.

Dr. Chiari ("Prager med. Wochenschrift," 1886, No. 50) reports a case of *Sarcoma*. He states that only seven cases have so far been reported. The patient was a boy aged 5; the first symptoms were those of retention, followed by the manifestations of chronic cystitis. No blood appeared in the urine until a catheter was used. The tumour could be felt through the abdominal parietes. The tumour sprang from the submucosa about the trigone. The prostate and seminal vesicles were invaded. A solitary gland was found enlarged. There were no other metastases. The growth proved to be a pure spindle-celled sarcoma.

Another diagnostic point is the fact that malignant tumours always infiltrate the bladder wall from a very early date. This condition may be detected by digital examination through the rectum. Having diagnosed the existence of a tumour, and formed some idea of its character, it is necessary to make out its seat, extent, and whether there be more than one, keeping in view at the same time the treatment by operation.

Thompson advises an investigation of the bladder through a perineal opening, completing the removal of the disease by suprapubic cystotomy if necessary. Felix Guyon (Paris) makes use only of the suprapubic incision. There are many reasons for thinking that it is best to open the bladder through the abdominal wall at once, for it is only by this method that large or multiple growths can be removed.

Küster excises the portion of mucous membrane to which the growth is attached, and closes the wound in the mucous membrane of the bladder with catgut sutures. He closes the wound in the bladder wall by several rows of catgut sutures; the first suturing the mucosa, the next the muscular coat, and the last the more external structures. He only unites the skin at the upper end of the wound, and plugs the lower part of it with Iodoform gauze, allowing a catheter to remain in the bladder through the urethra.

Thompson removes the growth with the finger nail and a metal scraper, others use Volkmann's spoon. In some cases it is necessary to apply the actual cautery to the base of the tumour.

Thompson, in opening the bladder, only makes a very small

opening with the knife, he finds that the opening may be dilated to the necessary extent by the finger. He leaves the lower part of the wound open.

REFERENCES.—"Brit. Med. Journ.," vol. 87, page 1268. "Revue de Chirurgie," November, 1886. "Deut. Med. Wochenschrift," No. 7, 1887.

BOILS—(See "Furunculosis"; also "Icthyol," p. 65; "Phytolacca Dec." p. 82.)

BONE (Diseases of). *J. Hutchinson, Jun., F.R.C.S.*

It may be roughly stated that in dealing with tubercular or strumous diseases of bones and joints the tendency of recent surgery has been to substitute, whenever possible, for the old extensive excisions, the use of the sharp spoon and the application of **Iodoform** to the scraped surface. This has been done in the belief that iodoform has a specific action on the tubercle bacillus; of late many investigations on this point have been made, especially in Germany. Most contradictory results have been obtained. Roxsing, König, and Baumgarten deny that the drug has any deleterious effect on the bacillus-life, whilst Sattler, Bruns, and De Ruyter (all from experiments on animals) come to an exactly opposite conclusion.

When large gaps are made in bones during operation, as for instance in the wedge-excision of the tarsus for severe talipes-varus, the question arises how best to promote union of the separated osseous surfaces. It is held by several German surgeons that the most rapid healing follows if the extravasated blood is left in the gap without attempt at drainage. This method, the "healing through a moist blood-clot," requires, of course, strict antisepsis, but if this be secured it may be confidently anticipated that the clot will become organised into firm fibrous tissue, and perhaps, ultimately, into bone.

Caries of tarsus.—Although the results given by Syme's amputation are as a rule exceedingly good, it is possible in cases of extensive caries of several tarsal bones to remove all the diseased parts and yet retain a useful piece of the foot. Thus Drs. Link and Bardenheuer independently practised with good results the removal of the cuboid and cuneiform bones, the bases of the metatarsals and the distal ends of the os calcis and astragalus. The incisions are all made on the dorsal aspect of the foot, the tissues of the sole are of course carefully spared, and the metatarsus is united to the sawn ends of the first two tarsal bones with a view to obtaining a shortened and anchylosed foot.

Those interested in the subject of *tumours and inflammatory diseases of the jaws* should on no account omit to consult Mr. C.

Heath's admirable lectures at the College of Surgeons, reported in the "British Medical Journal," for June and July of this year. Although too long for abstract here they may be recommended as giving a full account of the diseases of the jaws as far as the present state of our knowledge admits. It may be mentioned that the recently discovered disease actinomycosis is fully discussed.

Bone grafting.—Several observers have fully established the fact that in order to fill an extensive gap in a bone—such as is left after necrosis of the shaft of the tibia for instance—the use of small bone-grafts is of some value. The portions of bone should be taken if possible from the long bones of recently dead infants, unless lower animals are selected, and should as a rule measure not more than a few millimètres in size. A light antiseptic dressing and perfect rest of the part are essential to success, and the former should be left undisturbed as long as possible.

Bone suturing.—In operating for ununited fracture the best material for the suture appears to be either silver-wire or silkworm-gut, the latter is surprisingly streng and may quite suffice to retain the fragments in apposition for a sufficient time.

With regard to acute osteitis of long bones it is generally admitted that free and early incisions with, if necessary, perforation of the bone and the use of antiseptic solutions constitute the best treatment. When, however, the head and neck of the femur is the seat of acute inflammation, Mr. Macnamara states his belief that excision must necessarily be performed, and that it is best to perform the operation early. The cases are almost always met with in young children, usually occurring after an injury, and the high fever, intense pain and great swelling are the chief symptoms. Mr. Macnamara records a successful case in a child aged fourteen, treated by prompt excision of the diseased bone, the femur being divided below the great trochanter. It must be remembered that the disease is always of a septic nature, and that delay in operating is liable to lead to pyæmia. "Brit. Med. Journal," July 2nd, 1887.

Operations for genu valgum, etc.—It may be generally stated that when an operation is required for genu valgum division of the femur a short distance above the knee (Macewen's operation) has superseded Ogston's operation, which involves cutting into the knee joint, and in a fair number of the cases considerable resulting damage to that important structure. Osteo-clasis, or breaking the bone, is but little heard of in England, but in France it appears to be much employed both for genu valgum and for ricketty curves in other long bones than

the femur. Those interested in the subject should consult Pousson's monograph, which gives a large number of successful cases.

In what is known as hallux valgus, where the distal end of the first metatarsal is hypertrophied, and the toe bends towards the outer side, a good result may be obtained by an operation, of course with full antiseptic precautions. The projection of the metatarsal is chiselled off until the toe can be straightened, this measure is certainly better than the complete excision of the joint advocated by some surgeons.

BRAIN. *C. Stonham, F.R.C.S.*

Cholesteatoma of the Brain.—Dr. J. A. Price showed at a meeting of the Pathological Society, March 3rd, 1887, a specimen of cholesteatoma at the base of the brain. It was bounded behind by the medulla, in front by the optic chiasma, and laterally by the temporo-sphenoidal lobes. The growth was distinctly encapsuled, and of a pearly white colour. It contained much cholesterine. There were smaller tumours in the neighbourhood.

The patient was a woman aged thirty-nine who had suffered from epileptiform seizures for five years. There was double optic atrophy and she had been blind of the right eye for four years.

Subdural Blood Cyst.—In cases of hæmorrhage between the dura mater and arachnoid it not uncommonly happens that in the course of time the effused blood loses its colouring matter and forms a cyst, the walls of which may subsequently become dense and leathery, of varying size, attached to the dura mater. In very rare cases it is said that these cysts may actually lie loose, having no attachment to the membranes.

The cyst wall becomes vascularised and consequently behaves in all respects like an ordinary serous cyst. It may contain broken-down blood clots or bloody fluid. Two very interesting cases have been met with this year, and I think there can be no doubt that they belong to this class of subdural blood cysts. Professors Grainger Stewart and Annandale briefly report a case following an injury to the back of the head. On Jan. 1, 1887, there was gradually advancing anæsthesia of the right limbs, with double optic neuritis. Motor paralysis and coma with subnormal temperature began to appear, when on Feb. 22, Annandale trephined the frontal bone just in front of the left anterior parietal angle. A large cyst was found between the dura mater and the brain, containing 2 ounces of dark coloured grumous fluid. The surface of the brain was healthy; the cavity was syringed out, and at the time of the report (March 5,) the patient was doing well.

The second case came under the care of Mr. Franks at the Adelaide

Hospital (Dublin.) The patient was a man aged twenty-five, who had been subject to epilepsy for four years, which was attributed to a fall on the head in 1879. There was depression of the left frontal and parietal bones. The trephine was applied just behind the left frontal eminence, and on opening the dura mater, a blood cyst, the size of a walnut was found, which had caused a depression in the brain. The clot was removed and the cyst drained, and the patient made a rapid recovery. Two months after the operation there had been no return of the epilepsy, although previously he had an attack every month, and sometimes as many as five or six.

Surgery of the Brain.—In no department of medicine has greater progress been made, or more brilliant successes achieved than in that relating to the surgery of the brain. To be convinced of this, one has only to turn to the paper of Victor Horsley ("British Medical Journal," vol. i., p. 863, 1887) containing a series of ten operations on the brain with only one death, and to the excellent article by Dr. Hale White on tumours of the brain, including an elaborate account of one hundred cases collected from the Guy's Hospital *Post Mortem* Register ("Guy's Reports," vol. liii., p. 117). In the same reports (vol. xliii.) is a masterly article by Jacobson on Middle Meningeal Hæmorrhage. Cerebral abscess has also attracted much attention and has been ably dealt with by Barr, Barker, Greenfield, Macewen, and others, many successful cases of operation being recorded.

Under the articles "Middle Meningeal Hæmorrhage" and "Abscess of the Brain" will be found an epitome of the most important discussions and papers on these subjects. I purpose in this article to confine my remarks to tumours and irritative lesions generally.

Of the one hundred tumour cases commented on by Dr. Hale White, forty-five were tubercular, glioma twenty-four, sarcoma ten, cancer five, glio-sarcoma two, cystic four, gruma five, lymphoma one, myxoma one, doubtful three. With regard to the tubercular cases the average age of the patients was 12·45 years, and males were more often attacked than females. The cerebrum was affected in twenty-two cases, and the cerebellum in twenty—a noticeable fact when we remember the comparative size of the two parts.

Hale White points out that the only cases suitable for operation are those diagnosed early since the masses become multiple and the organs become affected (*vide infra* Horsley's case). Of the gliomata nineteen occurred in males and five in females, the average age being 32·4 years. The cerebrum was attacked in thirteen cases, cerebellum four, pons two, medulla one, dura mater one, and pituitary body three.

In four cases there were secondary manifestations. The patients affected with sarcoma average thirty-seven years of age. The situation of the disease was dura mater three, Casserian ganglion one, cerebellum and dura mater one. Sarcoma of the dura mater is usually multiple and therefore unfit for operative interference, but we must bear in mind that these statistics are compiled in the *post mortem* room, and in actual practice it must be the aim of the surgeon to operate before secondary manifestations have appeared.

Carcinoma was found only as a secondary growth, and therefore would not be suitable for operation.

With regard to the gummata Dr. Hale White points out that there would be no question of surgical interference, as when a tumour is diagnosed we should always treat the patient with iodides. Dr. Hale White draws attention to the occurrence of sudden death in these cases, but says that the respiratory and cardio-inhibitory centres are not usually involved, and that the cause of the sudden death must be sought elsewhere.

Accuracy of diagnosis, especially in the early stages, is a very great factor in the successful treatment of cerebral tumours by surgical means. Mr. Horsley lays stress upon the fact that an operation is specially justifiable since every other method (except in the case of gummata) is hopeless, and remarks that it should be performed early in the case, since later on it will probably be of no avail.

With regard to the anæsthetic it is noticeable that in cerebral surgery a very small amount of **Chloroform** is required to produce anæsthesia, especially if the dura mater is opened. No explanation of this fact seems forthcoming, but it is one of great importance to the anæsthetist.

In forming the scalp flap it should be lifted up with the periosteum instead of stripping up the latter separately. The bone is best removed by first using an inch trephine and then enlarging the opening by means of a circular saw mounted on a surgical engine, bone forceps being used if necessary.

In some cases where the dura mater has been preserved, pieces of bone have been replaced so as to strengthen the cicatrix, but this does not appear to have caused any deposition of new bone.

In the treatment of the dura mater, any portion which may be found adherent to the parts requiring removal must be itself removed. When the growth or diseased part of the brain is removed it is advisable to remove plenty of the surrounding brain substance, this is especially necessary in the case of new growths.

It would appear that recurrence of malignant tumours is particularly liable to take place among the white fibres. Mr. Horsley considers that it is not necessary to use a drainage tube in all cases: he prefers to bring the flaps into accurate apposition, leaving the lower end open so that any excess of discharge may escape. By this means immediate union is secured and the arachnoid trusted to absorb any excess of fluid as does the peritoneum.

Strict antisepsis is of the most vital importance. Mr. Horsley still continues the use of the carbolic spray until the wound has healed (about five or six days.) Thirst and clamminess of the mouth is often noticed after the operation and is probably caused by the morphia used before the anæsthetic is administered, and by the liquid diet necessary; this unpleasantness may be alleviated by brushing out the mouth with a strong solution of **Chlorate of Potash.** In Mr. Horsley's list of ten cases, all were males, ranging from four to thirty-eight years old: thus there was one under ten years old, three between ten and twenty, two between twenty and thirty, and four between thirty and forty. The scope of this article will not allow me to enter into the details of these very interesting cases, but I may say that in nine of them the operation was followed by more or less beneficial results. One of these patients was shown on Oct. 31st, 1887, at the Medical Society of London, by Dr. Hughlings Jackson. The operation had been performed on June 2nd, 1886 (*vide* "Medical Annual," 1887, p. 51), and since then the patient has very much improved, having only had eleven fits since as against fifteen in thirteen days before the operation: their severity was also less, consciousness being lost on one occasion only. The tenth case tabulated by Horsley terminated fatally from shock, nineteen hours after the operation. The patient aged eighteen, had been confined to bed for one year before the operation, which was only performed as a *dernier ressort:* the right lobe of the cerebellum was partly removed for a tubercular tumour weiging seven drachms. At the *post mortem* i was found that there were other masses in the brain and chronic general tuberculisation of the viscera.

Operations on the cerebellum are unquestionably very dangerous, and I here give some account of the cases of which I can find records. All of these terminated fatally, and Dr. Suckling, of Birmingham, suggests that the fatal issue may possibly be due to the fact of the very close proximity of the medulla.

A case is reported by Dr. Suckling ("B. M. J"., vol. ii, p. 667, 1887) operated upon by Jordan Lloyd, in which death took place in forty-eight hours from shock, the cerebellum having been incised and part of it removed, but the tumour itself left.

Mr. Bennett May records a case of cerebellar operation terminating fatally. A boy aged seven had double optic neuritis, persistent frontal headache, paralysis of the external rectus, and a staggering gait: these symptoms dated from April 1886. In October he was absolutely blind and there was nystagmus. The trephine was applied on the right side below the superior curved line of the occipital bone; the cerebellum appeared healthy, but there was a sense of resistance, and on its being cut into, a tubercular mass the size of a pigeon's egg was found and removed. The patient, who was in a very weak condition, died in a few hours from shock.

Dr. Weir brought two cases before the New York Neurological Society on April 5th. One of these had double optic neuritis, dilatation of the left pupil, left lateral hemianopsia and an awkward gait. A tumour was diagnosed in the right occipital lobe. It was removed and weighed five-and-a-quarter ounces, but unfortunately the patient died of recurrent hæmorrhage. The second case was one of cyst.

Prof. F. Durante, of Rome, read a paper at the recent International Congress at Washington concerning a successful case of removal of a tumour weighing seventy grammes from the frontal region of a woman aged thirty-five. The main symptoms were loss of smell and memory with melancholia. Part of the left frontal bone was chiselled away, and a fibro-sarcoma found which had perforated the dura mater, causing atrophy of the frontal lobe. The patient had recovered by the fifteenth day and went out. The operation had been performed four years previously, and the patient is now in good health.

Messrs. Edmunds and Lawford have drawn attention to the occurrence of optic neuritis and cerebral tumour, and suggest that its occurrence may be due to some untoward complication seriously affecting the success of the operation. They point out that this was the case in the fatal cases recorded by Horsley, Godlee and Bennett May, but with regard to this I think it probable that the optic neuritis merely shows that the tumour has been in existence for some time, and, as already pointed out, much of the success of these operations depends upon their early performance; and again in the cases referred to, it must be borne in mind that Godlee's case died of septicæmia about three weeks after the operation, while Mr. Horsley's, as also that of Bennett May, was from a cerebellar operation, the high mortality of which I have already alluded to.

An interesting case of secondary deposit of cancer affecting the membranes of the brain, has recently occurred in my own practice.

The woman had cancer of the breast with enormous enlargement of the lymphatic glands. Some month or so before she died she was subject to epileptiform attacks, especially of the right side. At the *post mortem* I found a growth about the size of, or rather larger than a hazel nut, growing from the inner surface of the dura mater on the left side and producing a very considerable depression about the centre of the ascending frontal convolution.

BRAIN (Abscess of.) *C. Stonham, F.R.C.S.*

Many very valuable additions have recently been made to the literature of abscess of the brain, including numerous cases of successful operative interference. Dr. Thomas Barr of Glasgow, has specially drawn attention to this subject, and has published an extremely able and valuable article in the "British Medical Journal," April 2, 1887. In this paper Dr. Barr, while allowing that the great cause of cerebral abscess is chronic otitis media, yet regards this rather as a predisposing cause, and considers that in many cases the suppuration is really determined by some intercurrent injury, and he quotes numerous cases in support of this view. Of the cases which he has collected, Dr. Barr considers that at lest 50 per cent. are due to chronic otitis media, and in this high estimate he is borne out by Mr. Barker. With regard to the precise way in which suppuration in the brain is induced, Dr. Barr says that it is most commonly by caries of the tympanic roof and mastoid antrum, thus extending to the middle fossa of the skull and temporo-sphenoidal lobes. A second method is by disease of the inner wall of the antrum and mastoid cells, to the posterior fossa and cerebellum, causing subdural and cerebellar abscess. In some cases in which there is no apparent bone disease, abscess may arise, owing to micro-organisms finding their way along the perivascular lymphatics of the internal auditory artery which anastomoses with the pia matral vessels.

Dr. J. A. Adams and Mr. Barker consider that this may also occur through the veins. At the same time it is admitted that in some exceptional cases the abscess may originate in the brain and subsequently cause otitis by bursting into the middle ear after setting up caries of the bone.

With regard to the most frequent position of the abscess, in seventy-six cases tabulated by Dr. Barr, fifty-five were in the temporo-sphenoidal lobe, thirteen in the cerebellum, four in the cerebrum and cerebellum, two in the pons varolii and one in the crus cerebelli.

Mr. A. E. Barker (London) speaking on this subject at the Med. Chi. Soc., Glasgow, corroborates Dr. Barr's statements and points out

that the most dangerous method of origin is by direct extension (as opposed to extension by phlebitis) since in these cases the septic meningitis may become general, and is very likely to affect the lateral sinus.

Mr. Barker lays down excellent rules for the examination of patients in whom cerebral complications are suspected. In the first place it is necessary to determine that the symptoms are not (as is frequently the case) due to pent up pus in the middle ear : should this be found to be the case the membrane must be incised and the symptoms will probably subside. If they should not do so, but should rather deepen and the cephalic cry come on, it is highly probable that there is meningitis or pyæmia, the latter being indicated if the symptoms show a tendency to improve and relapse, and if rigors are present. In acute cases of otitis, cerebral abscess is rare, the most usual history being one of long-continued suppuration which has ceased with the onset of the symptoms. In such a case it will usually be found that there exist polypoid granulations with retention of pus : the granulations should be removed, and if the symptoms still persist, the mastoid should be trephined, and the ear opened so as to get a free outlet for the pent-up and fetid pus, allowing the cavity to be thoroughly antisepticised—a matter of the first importance, especially if any subsequent operation should be needful. The signs of subdural abscess are vague at the onset, which is perhaps ushered in by a rigor with fever and pain, the patient being dull and drowsy. Optic neuritis is sometimes, though by no means invariably present.

The Treatment of cerebral abscess is early trephining and free evacuation of the pus, which is usually of a peculiar greenish and characteristic appearance. Absolutely free drainage is essential to the success of the case : and in the case reported by Dr. Gowers and Mr. Barker, was obtained by using small silver tubes. Dr. Macewen used chromicised chicken bones in a case which he successfully operated on. (" Lancet," vol. i, p. 616, 1887).

The most usual place for applying the trephine in temporo-sphenoidal abscess is from one to one-and-a-half inches behind, and about half-an-inch above the external auditory meatus.

In Dr. Macewen's case two openings were made, one in the situation above indicated, and another nearer the base, a drainage tube being inserted into either opening. It is interesting to note that general septic meningitis is rarely set up after opening these abscesses, the contents of which are often fetid, and this is doubtless due to the fact that the inflammatory action tends to unite the membranes to one

another and so shuts off the general cranial cavity. McCaird likens this to the adhesions of the opposed surfaces of peritoneum, and speaks of the union of the two layers of the arachnoid, but we must remember that the arachnoid has no parietal layers and is not a closed sac as was formerly supposed. The number of successful cases recorded during the past year is extremely promising. Thus, among others, Barker, Macewen, and Greenfield, each record one, and M. A. G. Miller, two cases.

To prevent cerebral abscess from occurring in a case of otitis media, a very great deal can be done; hitherto, it is undoubted that too little importance has been attached to a chronic discharge from the ear, but when the great danger of such a condition is fully recognised by all classes of people, practitioners and the public alike, abscess of the brain from this cause will be very much less frequent.

Several cases of cerebral abscess with empyema have been recently recorded. Dr. P. Delbret ("Revue de Chirrg.," No. 10, p. 829, 1887), relates a case and discusses its probable cause, the possibility of diagnosing and localising it, and the treatment by trephining and opening the abscess. In regard to the cause, Dr. Delbret believes the abscess to be metastatic and primarily due to "a microbian embolus" (a microbe, or leucocyte containing a microbe) finding its way through pleuro-pulmonary veins into the general circulation, and ultimately lodging in the brain. In the case related, the difficulty was not in localising the abscess but in the diagnosis of the exact character of the lesion. Until the true nature of the case was ascertained by *post mortem* examination, the disease was believed to be a patch of tubercular meningitis affecting the motor centre for the left arm. The *post mortem* revealed an abscess in the middle of the right ascending frontal convolution which had burst into the lateral ventricle. A second very interesting case is reported by Dr. David Drummond ("Lancet," vol. ii. p. 7, 1887.) The patient was a woman aged twenty-nine. On Dec. 18, 1886, she was admitted to the hospital with left-sided pleural effusion (serous) of fourteen days duration. On the 20th she had a rigor and fever, and the fluid was found to be purulent, and her condition was very critical. Amendment occurred up to January 4th, when the signs returned and fresh pneumonia was found. These symptoms again subsided, and on the 10th the empyema was evacuated and drained. The pus was fetid but became sweet in a few days after Condy injections. The general condition still continued to improve, but on Feb. 11th, there was another attack of pneumonia, subsiding in a week. On the 18th the tube was removed. On the

28th another rigor occurred and the temperature rose to 103·5°, and at this time there were no chest signs to account for the condition; the diagnosis was doubtful. On March 3rd the temperature had fallen, but three fits of a doubtful nature occurred: on the 6th three more, and on the 8th two more fits with severe headache, especially over the left parietal region with early optic neuritis. On March 9th, the patient had more fits which commenced with twitching of the eyelids and deviation of the eyes to the right, twitching of the nostrils and right angle of the mouth, then rigidity and spasm of the right arm and leg, left side of the face, lips, limbs, and lastly, of the whole body. During the fits there was loss of consciousness: in the intervals aphasia was noticed. An abscess was diagnosed in the left motor area. Mr. Waldy removed a large piece of bone over the ascending frontal convolution, and punctured the brain, but did not find pus. The posterior part of the inferior frontal convolution was then exposed and punctured with a like result. The wound was closed. The next day, March 10th, the patient was conscious, able to speak, not paralysed, and free from fever. This improvement continued till the 12th, when delirium set in, the temperature and pulse rising. The condition remained the same until the 19th, when death occurred, the temperature having gradually risen to 107° F. At the *post mortem* an abscess the size of a hazel-nut was found in the middle frontal convolution. The empyema had healed and the lung was recovered.

Dr. Drummond considers this abscess to have been embolic and thinks that the infarct occurred before Jan. 18th. He attributes the improvement in the condition after operation to be due to the relief of incision.

Remembering that cerebral abscess may occur with empyema (and also with bronchiectasis) and if the symptoms point to such a condition which can be localised, trephining would be indicated if the condition of the patient admitted of any surgical interference.

BRAIN (Cysts of the). *C. Stonham, F.R.C.S.*

From Dr. Hale White's paper in the Guy's Hospital reports (vol. xliii.) we find that out of 100 cases of tumour of the brain only four were cystic. A very interesting case of cysticercus of the tænia solium in the brain has been recorded by Dr. Douty ("Lancet," vol. ii. p. 69, 1886). The patient, a woman of 31, was admitted into the Worcester Asylum, suffering from acute mania, which had developed after symptoms of mental aberration had been in existence two years. There had been occasional aphasia, with mental hebetude, obstinacy and sulkiness. Mania gave place to dementia, and six months after

admission there was paralysis affecting the lower limbs, and aphasia. The condition became worse and more general, and she became idiotic. Five years after admission she could not give any expression to her desires by speech or writing. Six months later cerebral vomiting set in, with epileptic attacks of varying intensity. Cerebral tumour was diagnosed. The patient died nine and a half years from the first appearance of symptoms. Before death there was cerebral breathing, convulsions, and coma. At the *post mortem* a small cyst the size of a marble was found under the left superior frontal convolution, and a similar one in the fourth ventricle. The lateral ventricles were found much dilated, and the white matter of the left hemisphere had almost disappeared, that of the right side in a much less degree. This dilatation was due to the cyst in the fourth ventricle blocking it up. The epilepsy was doubtless caused by the direct irritation of the cysts, and the other symptoms by the compressing force exercised by the fluid in the ventricles. There were no cysts in any other part of the body. On examination by Mr. Bland Sutton these cysts proved to be the cysticercus of the tænia solium.

Dr. Hemming brought a case of cyst of the fourth ventricle before the Cambridge Medical Society, March 4th, 1887. The patient was a boy aged 18, who had shown symptoms for six years. They came on with left-sided convulsions, followed by slight paresis. The mind gradually became weakened; for the last four years the patient had remained in bed, and gradually lost consciousness. For one year and nine months before death he had not spoken, and there was left-sided rigidity with bi-lateral convulsions. At the *post mortem* a cyst the size of a hazel nut, containing clear fluid, was found in the fourth ventricle, and this had led to dilatation of the lateral ventricles. The precise nature of this cyst is not stated.

Dr J. C. Verco, of Adelaide, N.S.W., recently had a case of a man who died of right-sided hemiplegia, preceded by convulsions. After death a hydatid cyst was found beneath the surface of the right lobe of the liver, and two tumours (their nature is not stated, but I presume from the report that they were also hydatid) were situate in the brain, one on the upper surface of the right hemisphere, and a smaller one on the left, just over the anterior part of the third ventricle.

Another case has been reported by Dr. Weir, and was brought before the New York Neurological Society, April 5, 1887. Dr. Weir diagnosed a tumour of the right motor area; a trephine was applied, and the brain fruitlessly explored with a hypodermic needle. The case terminated fatally, and three cysts were found, implicating the

face, arm, and leg centres. The nature and size of these cysts is not mentioned.

BREAST (Inflammation and Abscess of.) *J. W. Taylor, F.R.C.S.*

Carefully applied *pressure and rest* ensured by some form of *bandaging* from as early a date as possible (heat, redness and pain being no contra-indication for this treatment) has been insisted upon by several recent writers. Success depends on the perfection of the bandaging. When both breasts can be included and the patient is confined to her bed, an old abdominal binder tightly applied and fixed with safety pins forms the best bandage. The chest may be well padded with cotton wool beneath the bandage, but it is essential that the pressure used should be considerable and evenly applied.

(See "Phytolacca," "Dict. of New Remedies," p. 82.)

BRIGHT'S DISEASE. *Robert Saundby, M.D., F.R.C.P.*

We apply the term Bright's disease, in commemoration of the great physician Richard Bright, to an inflammatory affection of the kidneys, which is almost always bilateral and diffuse, that is it affects all the various tissues of both kidneys, but presents great clinical and pathological variations, so that it becomes necessary to sub-divide it.

It may be stated at once that there is no sufficient justification for making waxy degeneration a separate form of Bright's disease. Where the kidneys are affected by primary waxy disease as part of a general condition implicating liver, spleen, intestines, etc., the disease is general waxy degeneration, and not Bright's disease, for the mere existence of albuminuria cannot in the light of our present knowledge be allowed to form a sound basis for this title. Other cases of waxy kidneys are those in which waxy degeneration supervenes upon chronic inflammatory disease, and this complication is very common.

The great *clinical* distinction of Bright's disease is between *acute* and *chronic* cases; but the pathological distinction must go further and distinguish between *acute* attacks in *healthy*, and acute attacks in *previously diseased* kidneys, and between *chronic* disease in kidneys which have or have not been the subjects of one or more *acute* attacks.

Acute Bright's disease, or *acute nephritis* in *healthy* kidneys may be caused by the action of such drugs or poisons as cantharides, turpentine, bi-chromate of potassium, etc.; but practically it is almost invariably met with as a complication or sequel of some acute disorder, such as scarlatina, diphtheria, typhoid fever, varicella, small-pox, tonsillitis, pneumonia, etc. It occasionally occurs in the second stage of syphilis. Modern pathological doctrine ascribes this to the direct

action of these morbid poisons on the kidneys, and in some cases, *e.g.* diphtheria, a micro-organism has been demonstrated.

Chronic Bright's disease on the other hand, unless resulting from an uncured acute attack, has a more complicated causation. We must look for the explanation of the great frequency of chronic Bright's disease in this country, to our cold and damp climate, which checks the action of the skin, and makes the kidneys bear an undue share of the work which skin and kidneys are designed to assist one another in performing. We see the converse of this in hot climates, where the skin is very active, and skin diseases are common. This fundamental factor is aided by our *diet*, which is rich in urea and uric acid-forming substances, and by our use of alcohol all of these are eliminated by the kidneys, and stimulate it to a degree of overwork, which easily passes into irritative congestion and inflammation. If let alone, such influences tend to bring about a chronic inflammatory change characterised by destruction of the glandular elements of the kidney, and their replacement by elementary connective tissue. This results in what is called the cirrhotic kidney. But such a kidney is very liable to acute attacks from the effects of *chill*, or an overdose of alcohol, or an excessive amount of uric acid in the blood, and very many of the cases of *acute* Bright's disease met with in practice, are examples of intercurrent acute attacks affecting such kidneys. These attacks modify the anatomical condition, the glandular epithelium proliferates and undergoes fatty change, and we get a *mixed fatty and cirrhotic kidney*, which, according to the stage at which the acute attack occurs, and the frequency of its repetition, becomes *large* or *small*, more *fatty* or more *cirrhotic*. It is now generally admitted that nearly all chronic cases show evidences of this mixed process.

Chronic febrile affections, such as phthisis and surgical hectic, lead to a sub-acute nephritis, in which the organs are usually enlarged, pale and fatty, and very often this is complicated by waxy degeneration. The amount of fibroid or cirrhotic tissue is very small. This condition is the direct result of the fever process.

Symptomatology.—The symptoms of *acute* nephritis are *dropsy*, *urine diminished* in quantity, albuminous, containing *blood*, depositing epithelial and hyaline casts of the renal tubes.

The *dropsy* may be limited to puffiness of the eyelids or face, or it may amount to general anasarca with effusion into the serous cavities; or it may attain any intermediate degree. It is rarely, but sometimes, absent. When acute attacks supervene in chronic nephritis, the dropsy is generally great and persistent.

The urine is reduced from the usual 40 to 50 ozs. daily, to 8, 10, or 20 ozs. There may be entire suppression, but this is usually met with in children, and is temporary.

The amount of albumen is usually large, the urine forming a white coagulum on heating, which on settling may amount to a half or more of the column of fluid. This is only an apparent proportion, albuminous urine rarely containing more than 2 per cent. of albumen. On the other hand, in mild cases there may be only a haze.

Blood in like manner varies in quantity, from enough to colour the urine vinous red, to a trace that can only be detected by the microscope, the spectroscope, or the guaiacum and ozonic ether test.

Epithelial casts are usually present. In their absence we are not justified in thinking that the inflammation has been sufficiently intense to affect the vitality of the epithelium. But hyaline casts are said to be formed by the epithelial cells in an early stage of inflammatory irritation. Blood casts are of course present when hæmaturia is at all abundant.

The symptoms of *chronic* nephritis necessarily vary. In uncomplicated cirrhosis, where no acute attacks have occurred, there is no dropsy till towards the end, when the muscular wall of the heart begins to fail, and œdema sets in in the lower extremities.

The *urine* is increased in amount until the heart fails to keep up the necessary pressure in the renal glomeruli.

Albumen is present in traces, and may be altogether absent, though this is not so common as is sometimes supposed. It needs to be looked for carefully in many cases.

Blood is usually absent, though attacks of hæmaturia occur not infrequently.

Hyaline casts are rarely absent, yet are rarely abundant. They should be looked for under a low power (half inch).

But when acute intercurrent attacks occur, these symptoms are replaced by those of acute nephritis; dropsy sets in, the urine is more or less diminished, the albumen increases in amount, blood may be present, and numerous epithelial and hyaline casts are visible under the miscroscope.

In the *sub-acute* nephritis of chronic febrile disease, the symptoms may be altogether latent, and are generally masked by the phenomena of the primary disease. There may be dropsy, but this is usually absent; albumen is always present, but varies in amount; blood is rare, and hyaline and epithelial casts are not usually abundant.

This outline is not intended to give a complete picture of Bright's

disease, which in its varieties and their complications would occupy far more space than is available, but it may serve as a basis for the principles of prognosis and treatment.

Acute Bright's disease in healthy kidneys is an essentially curable condition, just as curable, in fact, as the acute diseases which give rise to it. In many cases simple rest and warmth in bed on light diet suffice to cure it, without any special treatment. The chief point obviously is to protect the kidneys in their weakened condition from the effects of chilling the skin, or the irritation of substances in the course of elimination, such as uric acid, alcohol, etc. We fulfil these indications by placing the patient in blankets, clothing him in wool, giving him light non-nitrogenous diet, promoting the action of the bowels and skin, and giving **Bitartrate of Potash Water** (Potash Imperial) as a drink.

By such treatment, employed with *patience* on the part of both the physician and the invalid, and the exercise of great care and prudence in convalescence, a complete cure can be obtained.

In the *acute intercurrent attacks*, the prognosis is plainly quite different. The probabilities are against the patient ; he may not recover : he certainly cannot get cured. But a large proportion pass through several acute attacks safely, and the prognosis must depend upon the present condition of the patient, and the evidence of organic complications viewed in the light of his past history. Evidence of heart failure is the most unfavourable complication, and the presence of *persistent dropsy located in the lower extremities* is always a sign that this complication exists.

The principles of treatment are the same, but in view of the graver prognosis, we feel it our duty to do our utmost, and the use of the hot-air bath especially is indicated from the first.

Treatment of Complications.—Dropsy : *General anasarca*, if very extensive, may not be movable by diuretics and purgatives, while it is desirable to observe that the use of drastic purgatives, such as **Elaterium**, is not unattended by danger. There should be no hurry to employ special means, but when the time comes, drainage by Southey's trocars with tubing attached, is the best means. It is not always successful, the effusion being sometimes reproduced as fast as it is drawn off. *Effusions* into the *serous sacs* may also be syphoned off in the same way, but *old-standing pleural effusions* should not be incautiously interfered with, as withdrawal of the fluid is sometimes followed by sinking and death.

Œdema of the glottis should be treated by ice, puncture, and in the last resort by tracheotomy.

(See also "Apocynum," p. 16; "Arbutin," p. 17; "Chimaphila," p. 38; "Cloudberry," p. 39.)

INFLAMMATIONS.—*Pneumonia*, *pleurisy*, *pericarditis*, or *peritonitis*, if they occur, should not be treated very actively, the use of counter-irritants being especially undesirable, except in the form of hot fomentations or linseed poultices.

Pulmonary and *gastric catarrh* are very common, and generally present together in greater or less degree. **Ipecacuanha** is indicated for both, but **Bismuth** may be needed for the stomach complication. The following powder is a very useful one :—

℞ Bismuthi Carb.,	gr. x	Sodæ bicarb.	gr. x
Pulv. rhei.	gr. iij.	Pulv. Cinnamomi Co.	gr. x.

Fiat pulvis., mitte duodecim.

Sig.—A powder to be taken half-an-hour before food in a little milk.

Erysipelas is not uncommon, and should be treated by the tincture of the **Perchloride of Iron** in 15 minim doses every two hours, the affected part to be well dusted with starch powder, and wrapped in cotton wool.

Retinitis is not susceptible of special treatment.

Hæmorrhages are very common. Epistaxis is often profuse, and may be fatal, in fact, the only cases of fatal epistaxis met with are due to chronic Bright's disease. If the serious nature of the complication is recognised, the posterior nares should be plugged, and **Hamamelis** injected into the nostrils. **Hamamelis** seems to possess valuable hæmostatic properties, when it can be applied to the bleeding surface; but is useless otherwise. An ice-bag may be placed over the upper part of the face if it can be borne. **Ergotin**, 3 to 5 grains, may be injected subcutaneously, the solution being prepared at the time, as it is readily soluble in water.

Hæmatemesis should be treated by **Hamamelis** by the mouth, and an ice-bag on the abdomen. All food should be iced and in fluid form for several days till all blood has disappeared from the stools.

Melæna requires similar treatment.

Hæmaturia is common in moderate amount, but may be sometimes profuse and rapidly fatal. Unfortunately, no drugs have any direct effect on hæmaturia. In mild cases this symptom calls for no very active treatment, but dry cups may be applied over the loins, and the following mixture given :—

℞ Acidi Tannici	ʒij	Glycerini	ʒss
Sodæ bicarb.	ʒij	Aq. ad.	ʒvj

M. Sig.—A tablespoonful every four hours.

In a very severe case wet cupping over the loins, followed by the application of an ice-bag, and the hypodermic injection of **Ergotin** in full doses might be tried; but these cases are very rare, and have hitherto not yielded to any treatment employed.

Purpura, or subcutaneous hæmorrhages, call for no special treatment, except rest in bed, and the use of **Iron. Turpentine**, which is a specific for ordinary purpura, is inadmissible here.

Retinal Hæmorrhages do not require any special treatment.

URÆMIA.—Uræmic phenomena occur under various phases:—

Nervous: Headache, chiefly occipital; giddiness; blindness; deafness; cramps, formication, numbness; convulsions; hemiplegia; coma.

Respiratory: Asthma.

Cardiac: Palpitation.

Digestive: Vomiting; diarrhœa.

Headache and *giddiness* are relieved by **Caffeine** in 1 or 2 grain doses in pill, or by 1 or 2 minims of the 1 per cent. solution of **Nitro-glycerine.**

Blindness and *deafness* should be treated by a purgative and the hot-air bath, or the subcutaneous injection of the $\frac{1}{12}$th grain of **Pilocarpine.**

Cramps, formication, and numbness are forerunners of more serious nervous symptoms, and should be treated by the methods just mentioned.

Convulsions, if soon over, call for no active treatment; but if persistent, blood to the amount of 12 or 16 ozs. should be taken from the arm.

Hemiplegia and *coma* call for bleeding to the like amount. The writer has seen coma cured by the use of the hot-air bath after bleeding had failed. **Pilocarpine** should be tried.

Asthma.—Dr. Wm. Carter recommends drachm doses of **Ozonic Ether**, but this remedy has not given the writer satisfactory results. Bleeding, purging, the hot-air bath, or **Pilocarpine**, should be relied on and employed according to the urgency of the symptoms.

Palpitation is not a very urgent symptom, and may be usually treated by **Nitro-glycerine**, with a purgative and the use of the hot-air bath.

Vomiting and *diarrhœa* are nature's methods of eliminating the poison, and should not be checked, though the skin should be got to act to aid in the process.

Heart failure.—The evidence of failing heart suggest the use of

Iron and **Strychnine**, combined perhaps with **Digitalis**, but as is well known, this drug cannot be relied on when the muscular wall of the heart has undergone degeneration.

TREATMENT OF CHRONIC BRIGHT'S DISEASE.—The general treatment of chronic Bright's disease must be in the main hygienic.

Climate.—The remarks already made on the effects of our damp and cold climate indicate the desirability of such patients seeking, at any rate during the winter, some more genial residence, such as may be found in Algiers ; and if this be not possible, the drier and warmer parts of our own island, though, unfortunately, the dry places are generally cold, and the warmer ones wet. Hastings and Ventnor are as good as any.

Clothing.—The adoption of Dr. Jaeger's system in its entirety is the very best plan for these patients. There is, no doubt, an element of exaggeration and nonsense about the system, but it is one of the weaknesses of human nature to prefer these admixtures of sense and nonsense, and we should not refuse to avail ourselves of what is useful in them.

Exercise in moderation should be not only permitted but enjoined.

Diet.—The absolute milk diet enforced by some physicians is intolerable to most patients, and unnecessary. It is sufficient to enjoin abstinence from butcher's meat, permitting fish, fowl, and game. Alcohol should be abstained from altogether, or taken in strict moderation, and in very dilute form.

Hard water is especially injurious to the kidneys. Aerated distilled water is a pleasant and really valuable table drink. If there is a decided gouty tendency, Vichy water should be given. Filtered rain water, or distilled water, should be used for making tea and coffee. A hot-air bath should be taken once or twice a week, and a purgative about as often.

Iron in the form of the tincture of the **Perchloride**, may be given as a tonic, or small doses (1 minim) of the **Nitro-glycerine Solution** may be assiduously tried as a means of keeping down the high arterial tension which exercises such a strain upon the circulatory system. These drugs may be given at the same time, though not in the same mixture. The **Nitro-glycerine Tablets**, made with chocolate, may be used.

BROMIDROSIS. *N. Whitelaw Bourns, M.D.*

May be universal when the whole body is found to exhale an unpleasant odour ; or much more frequently the trouble is a local one, confined to certain regions as the parts genitalia or axilliæ. The quan-

tity of secretion may be normal, but usually it is found to be excessive. Hebra and Thin have shown, that the disagreeable odour does not belong to the sweat as it is poured out; but rather is due to its decomposition, and the development of large numbers of bacteria.

TREATMENT, *internally*, (see "Hyperidrosis.")

The parts should be frequently washed with **Thymol Soap**, a solution of **Permanganate of Potassium**, or as recommended by Thin, a saturated solution of **Boracic Acid**, used both for bathing and soaking the socks or clothing.

Cloasma, *Melasma*, *Melanoderma*, must not be confounded, as it is too often, with Tinea versicolor, a distinctly parisitic disease, while cloasma is a diffused pigmentary deposit in the deeper cells of the rete malpighii. The affection is more common in women than men, particularly during pregnancy. In both sexes the disease may result from neurotic disturbances, or as shown by Erasmus Wilson, anæmia may be the cause.

The general health must receive attention, and the uterine functions be enquired into locally, applications of the **Perchloride of Mercury**, 2 or 3 grains to the ounce, **Sulphur**, **Tincture of Iodine** or **Acetic Acid** may be used.

McCall Anderson gives the following formula:

℞ Saponis Viridis	℥ij	Hyd. Perchloridi	gr. vj
Sp. Rectificati	℥j	Sp. Lavandulæ	℥j
Solve filtra, et adde		Solve.	

Professor Selon suggests the very simple, and, at the same time, very effective treatment of covering the patch with a layer of **Chrysarobin** dissolved in **Chloroform**, over which **Traumaticin** is to be brushed as a protective. By this proceeding he has rapidly cured several cases of melasma.

BRONCHIECTASIS. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

The diagnosis of this condition is attended with difficulty in most cases. The symptoms to be relied on are violent cough occurring in paroxysms, continuing until a quantity of muco-purulent matter is coughed up, and then ending in an attack of retching, which is often followed by vomiting. The sputum is very often horribly fetid, is generally profuse and nummulated, and contains neither elastic tissue nor bacilli. The physical signs vary according to whether the tubes are full or empty; in the latter case when the dilatation is large—for instance, formed from the coalescence through ulceration of several dilated bronchi—the signs will be those of a cavity.

Small regulated inhalations of **Chloroform**, a few drops at a time;

of **Eucalyptus**, or, according to Dr. Powell, of some pungent vapour, such as **Essence of Peppermint** in hot water, will often relieve the paroxysms of cough. In syphilitic cases the iodides must be given.

When the expectoration is fetid the drain on the patient's strength is considerable. **Cod-liver Oil** or **Iron, Mineral Acids** and **Bark** should be administered together with antiseptics internally, and the latter also by inhalations. Pure **Terebene** (5 to 10 minims) with **Iodol** (1 to 3 grains) dissolved in **Cod-liver Oil** and administered three times a day; **Sulpho-Carbolate of Soda** (5 to 10 grains) or **Creasote, Carbolic Acid**, or **Tar** in pills may be given. Inhalations from one of the ordinary respirators—Dr. Wordsworth's or Coghill's — should be carried out for thirty minutes or longer, three times a day, and the respirators may be worn all night if not objected to. A good formula is Dr. Coghill's :—

℞ Tr. Iodi Æthereatis,		Creasoti	℥j
Acidi Carbolici	āā ℥ij	Sp. Vini Rect. ad	℥j

Chloroform or **Sulphuric Ether** may be added at discretion if the cough is very urgent.

Dry antiseptic inhalations of this kind give more relief to cough and fœtor than any other measures, and many patients find little inconvenience from use of respirators.

In cases where all treatment fails to correct fetor of breath or relieve harassing cough, and when the termination is generally in death from septicæmia, the opening of the cavities from outside and drainage is to be taken into consideration. Operation is still further indicated—from the greater possibility of a successful issue—in cases where the evidence goes to prove that the bronchiectasis is single, or if more than one exists, that they are situated in one lung, are in the lower lobe and covered with adherent pleura.

Dr. Williams and Mr. Godlee have published several successful cases of bronchiectasis cured by opening the cavities and drainage. M. Pruegrueber, of the Hospital Trousseau, reports a successful pneumotony in which the procedure adopted was to dissect up a **U** shaped flap of skin, resect one rib, and make the opening into the lung with the thermo-cautery. These authors have established that there is little risk of the operation giving rise to either local or general disturbance. Of course previous to operation the exact site of the cavity must be determined as nearly as possible ; it is most important that it should be ascertained whether the cavity is single, and *operation* should not be attempted where the bronchiectases are many or where there is much emphysema. Should the lung be found non-adherent

on cutting through the parietal pleura, it would be well to wait a few days before proceeding, to give time for adhesions to form.

BRONCHITIS, Acute. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

At the first onset, when bronchitis results from a chill, the old-fashioned remedies of a copious hot drink at bedtime, with a hot foot-bath of mustard and water and a dose of **Dover's Powder**—the patient being warmly covered when in bed—are serviceable.

In all cases of acute bronchitis in adults the patient should be confined to bed in a room of about the temperature of 65° to 68° F. The air of the room should be rendered moist by a steam-kettle, and a large hot poultice of 1 part of mustard to 4 or 5 of linseed meal applied over the front of the chest and frequently renewed; in many cases, on account of the weight and inconvenience of poultices, turpentine stupes are better, the chest at the same time being well packed in cotton wool. The turpentine liniments well rubbed into the front of the chest often give relief. In children, after the first application of a mustard and linseed meal poultice to the front of the chest until the skin is reddened, it is well to apply a cotton-wool jacket. Another most useful plan is to get made a closely-fitting flannel jacket; this is to be dipped in warm olive oil and then put on, being covered with cotton wool and a bandage; the oil may be freshly applied to the jacket every morning. By this means the determination of the blood to the skin of the chest is most effectually kept up, without the inconvenience of frequent poulticing. If there is no steam-kettle, a red-hot brick in a bucket of hot water will fill the room with steam. The best steam-kettles are the smaller ones heated by a spirit lamp; they can be placed on a chair by the bed-side, so that in the case of children the end of the delivery tube can be brought within the curtains of the cot; care must be taken that the temperature of the room does not fall during the night.

Now as to therapeutic measures: before secretion is established, nothing to our mind gives such speedy relief to the soreness over the trachea and behind the sternum as frequent inhalations—every hour or so—of **Tr. Benzoin. Co.** in hot water; after the first day or so they are useless. In young strong adults, ♏ 15 of the **Antimony Wine** may be given every three hours until secretion is established, with **Liq. Ammon. Acetatis**, but it should be used only in the robust. **Ipecacuanha**, 10 to 20 minims of the wine every four hours with **Saline Diaphoretics**, is most generally useful. It should be borne in mind that the depressing effect of these remedies is to be carefully avoided. 10 minims of **Liq. Morph. Hydrochlor**, or 2 to 3 minims **Liq. Opii.**

Sed. may be added where the cough is very harassing. Dr. C. Muirhead recommends **Tr. Lobelia Æther.** in cases of asthmatic type as almost a specific, but to be used with caution. The tinctures of **Aconite** and **Digitalis** have found favour with some physicians at this stage.

When secretion has been established, the indications are: (1,) to facilitate expectoration; (2,) to control it if excessive, and (3,) to prevent unnecessary cough. The best expectorants at first are **Squill,** with **Ipecacuanha;** and Dr. Muirhead says that **Hyoscyamus** and **Belladonna** act well with them if a sedative is required, and that the best menstrum is **Quillaya Saponaria** or **Serpentaria Root,** the latter promoting appetite. Later, **Carbonate of Ammonia, Chloride of Ammonium,** infusions of **Serpentary** or **Senega** with **Squill,** and sedatives, especially **Opium, Morphia,** and **Hydrocyanic Acid,** may be used.

When much mucus has accumulated in the bronchial tubes and cannot be expelled, an emetic of 20 grains of **Zinci Sulph.** in a tumbler of warm mustard and water is very useful, or a hypodermic injection of **Apomorphia** may be administered.

Should the bronchial tubes be much loaded, and expectoration difficult, narcotics, especially **Opium**—and here we may note that opium must never be given when there is any lividity of lips—should be avoided, and the patients should lie with the head high and be encouraged to cough frequently. The foregoing particularly applies to children. Alkalies are useful in the secretion stage when there is a gouty habit, **Tr. Lobelia** if there is much dyspnœa, and **Iodide of Potassium** if expectoration is difficult. **Digitalis** is of service when the heart's action is weak, or shows a tendency to failure, with symptoms of overloading of right ventricle, and **Strychnine** when the respiratory function is feeble. Dr. Douglas Powell states that he has seen **Belladonna** substituted for **Digitalis** in some cases with advantage, and that in others where there is over-distension of venous system from a failing and over-strained right heart, venesection is to be practised.

Elderly patients often require the frequent use of stimulants, preferably brandy, and after the first stage **Carbonate of Ammonia** in a stimulating expectorant mixture. Food should be light and nutritious and given often. Both in the aged and in children opium is better avoided. If a narcotic is required the **Bromides,** or **Urethane** (15 grains) for adults, **Paraldehyde** (40 minims to 1 drachm) repeated in an hour, if necessary; or a small dose of **Chloral** may be given.

The special dangers to be warded off in children are collapse of lung or emphysema, and catarrhal pneumonia. One of the best remedies for these little patients is **Vin. Ipecac.** in moderate doses in diaphoretic mixture every four hours at first, and combined with other expectorants when secretion is free. In addition to the hygienic rules mentioned above, it may be said that the diet at first should be milk and broth, and that subsequently improved, and that the child should be fed often. In weakly children or infants the brandy and egg mixture of the B.P., or a few drops of brandy in the milk are necessary, especially if there be any signs of collapse of lung. When there is much accumulation of secretion, an emetic as recommended above may be given ; and it is important, if the child is very drowsy as they generally are in these cases, not to let him sleep long, but to rouse him at frequent intervals and encourage cough. Children do not bear sedative expectorants well—alkalies or salines are best, or **Terebene** 2 to 3 minms. If the fever is high, give **Quinine** in moderate doses. Should atelectasis occur, reinflation may possibly be effected in mild bronchitis affecting the larger tubes ; but in capillary bronchitis, if at all extensive, reinflation is not to be accomplished. The signs of atelectasis are drowsiness, rapid, shallow breathing, subnormal temperature and lividity. The child should be placed in a hot bath of mustard and water till the arms of the nurse who holds him begin to tingle. Stimulating liniments may be applied to the chest wall, and he should be made to cry or to cough. Mechanical measures for artifical respiration are valuable. Sleep should be only allowed for short periods and the strength supported by stimulants, with plenty of milk and beef tea. If drugs are given, a mixture containing **Quinine** and **Ammonia** is, according to Dr. Eustace Smith, the best.

Finally, every case of acute bronchitis must be treated according to the individual requirements noted, and not on any stereotyped plan. In the late stages where secretion remains excessive, **Strychnine,** the mineral acids, **Digitalis** with **Tincture of the Perchloride** or **Pernitrate of Iron**, and inhalations of **Creosote, Pine Oil**, etc., are good remedies ; while it is well to give children **Cod-liver Oil** for some little time after the attack until the health is re-established, especially in those families in which there is a tendency to chest complaints.

Chronic Bronchitis is generally associated with more or less emphysema. The patients should have a nourishing diet, live in warm dry houses, and should be careful to avoid exposure to cold and

wet; the clothing should be warm, and flannel worn next to the skin. They should if possible remain within doors during bad weather and after sunset, especially during the late winter and early spring in England. **Cod-liver Oil**, the **Hypophosphites, Strychnine, Arsenic**, and **Iron** are of value. The state of the heart should be carefully watched, and if there is heart-disease, or if the right heart is overstrained, **Digitalis** or other cardiac tonics administered. The digestive system should be kept in good order and the bowels freely open. When the secretion from the bronchial tubes is excessive the mineral acids, **Bark**, the astringent preparations of **Iron, Chloride of Ammonia**, and the balsams, with inhalations containing **Creasote, Tar**, or **Carbolic Acid**, are useful. **Digitalis** with **Iron** and **Strychnine** forms an effective mixture in this condition. Stimulating liniments, especially the turpentine ones, rubbed into the chest relieve soreness and pain. To aid expectoration and soothe cough, the remedies alluded to under the acute form may be employed, the same precautions as to the use of narcotics being observed. When the sputum is viscid and expectoration difficult **Alkalies** and **Iodide of Potassium** give relief, while in cases where the cough comes on in paroxysms, and where there is much dyspnœa, **Arsenic, Iodide of Potassium, Stramonium** and **Belladonna** are effective. Dr. Fraser recommends the use of the nitrites in cases attended with great dyspnœa, and says that they give complete relief to the symptoms (see under Asthma). Where there is constant irritable cough **Morphia, Codeia**, either in lozenges or in mucilaginous mixtures, and **Bromide of Potassium** are of service.

Pure **Terebene**, in doses of 5 minims every four hours or less often, is of great value in this disease; it may be given on sugar or in water, and relieves dyspnœa and cough. According to Dr. Suckling, and his experience coincides with our own, pure **Terebene** greatly benefits many patients, but fails in about 28 per cent.: it relieves the dyspnœa more than cough. Many patients who suffer from flatulence find that the terebene cures this whilst they are taking it. Its disadvantages are its tendency to repeat, and to cause nausea and headache; and in three patients out of a large number (about 300 to 400) we found that albuminuria occurred, which, however, at once ceased on discontinuing the drug. Prof. Da Costa finds that **Oil of Sandal Wood** (5 minims) in capsule three to five times daily in cases where the expectoration is fetid relieves the fetor, and very much reduces the amount of the expectoration. Dr. Boyland, of New York, has obtained good results from the exhibition of **Hydrate of Terpina**—a new alkaloid of

turpentine—in doses of 2 to 5 grains every two, three, or four hours. His formula is :—

℞ Hydrated Terpina	gr. xxiv	Liq. Lactucarii	ʒj
Glycerine	q.s. ut f. sol.	Dose ʒj.	

Dr. Eustace Smith recommends **Tar** in chronic bronchitis in children attended with excessive expectoration. A drop of liquid tar may be given on sugar two or three times daily, or in pill. Whenever the patient's circumstances are such that he is able to afford it, the chronic bronchitic should winter in some warm climate, or take a long sea voyage. In this country Torquay, Penzance, Ventnor, Bournemouth, Tunbridge Wells, Clifton, Hastings, or Teignmouth; abroad, the Riviera, or Algiers, some parts of Italy, Pau, Biarritz, or Arcachon are most suitable ; or the long sea voyage to Australia may be undertaken.

BURNS. *W. H. Elam, F.R.C.S.*

Professor Mosetig, during the last five years, has treated with **Iodoform** 48 severe cases of burns and scalds with the most satisfactory results. The danger of iodoform-intoxication in burns, he believes, is merely theoretical, as neither he nor others who treated burns with iodoform had, when using certain precautions, ever met with bad concomitant effects. The action of iodoform is twofold—it is both analgetic and antiseptic. The patients, according to Dr. Mundy's experience, which Prof. Mosetig fully confirms, obtain ease a few minutes after the application of iodoform to their burns, and are soon fit to be moved. The patients, in Prof. Mosetig's wards, repose quietly and without pain in their beds ; they recover more rapidly, with only moderate and consequently less exhausting discharges, and with smoother cicatrices, than those differently treated. He uses iodoform in very limited quantities only, either not employing the powder at all, or in rare instances ; he sprinkles it by means of an insufflator in very thin layers, only on those places where the integument has been burnt in its whole thickness, and has assumed a parchment-like appearance. As a rule he covers the injured parts directly with compresses of iodoform gauze, not prepared in the usual way, by thickly dusting the gauze with the powder, but by impregnating with an etheric solution of iodoform, the purified gauze which has previously been freed of grease. He proceeds in the following manner: After opening and excising the vesicles, and cleaning the burns with cotton-wool, which had been steeped in a half per cent. solution of table salt, and well pressed out, he covers the wounds with dry compresses consisting of several layers of iodoform gauze, prepared

as stated above, of corresponding size, which are exactly and smoothly laid over the whole surface of the injury. Over this an equally large or somewhat smaller piece of gutta-percha tissue is placed, taking care that it does not form folds or creases. The whole is wrapped in a very thick layer of medicated absorbent cotton-wool which overlaps to a great extent the compresses, or, better, surrounds the whole limb or injured part of the body. This cotton-wool is finally fixed by several turns of bandages, which at the same time exert a gentle pressure.

In burns and scalds of the face the mode of dressing described will, of course, be impossible ; instead of it an iodoform-vaseline ointment (1 : 20) is employed, and covered with a mask of gutta-percha tissue. The ointment has to be daily renewed, and is always spread on at the thickness of a knife-blade.

BURSÆ. *W. H. Elam, F.R.C.S.*

The importance of the careful management of inflamed or other morbid conditions of bursæ is shown by the contribution of Prof. Ranke on tumours of bursæ. Some of the so-called tumours are probably not neoplasms, but inflammatory and secondary changes in the bursa, *e.g.*, induration, fibrinous, and hæmorrhagic deposits, calcifications, etc. Ranke, however, describes three cases of true tumours. (1,) A mycoma of the left prepatellar region in a farmer at 63. The growth had been noticed two years, and was said to be due to repeated contusions. The growth was extirpated, but the patient died in two weeks from pneumonia.

The second case was one of sarcoma of right extensor bursæ ; it was scraped in the first instance, but recurrence taking place the whole was extirpated and a cure completed.

The third case was an angeioma, originating in a cicatrix of an old bursa patella which was extirpated.

Some cases of carcinoma of bursæ have been recorded, but in these a fistulous opening has been demonstrable between the skin and the cavity of the bursa ; for it would be contrary to our ideas of the pathogenesis of carcinoma to find a carcinoma taking origin in the connective structures only which are found in a bursa. ("Archiv. F. Klin. Chirurg.," B. 33, H. 2.)

The *Subhyoid* bursæ sometimes gives a good deal of trouble. Dr Weir, New York, reports such a case. It occurred in a young man at 22, and had existed 15 years in spite of injecting with iodine and tapping. Dr. Weir extirpated the cyst wall, but before doing so, and to facilitate the dissection, he filled the cyst full of melted paraffin by

means of a syringe, and caused consolidation of the paraffin by applying an ice bag for a few minutes. By this means the whole sac could easily be dissected out, even the part behind the hyoid bone. ("Annals of Surgery,") June, 1887, p. 512.

CALCULI BILIARY. (See "Liver," Functional Disorders of.)

CALCULI VESICAL. (See "Lithotomy.")

CANCER.

The treatment of this disease is considered under the special organs which it effects, The articles "Chian Turpentine," p. 34; "Euphorbia," p. 50; "Galium Aparine," p. 52; "Hydrastis," p. 63; "Rhus," p. 88, may also be consulted.

CATARACT. *Wm. Lang, F.R.C.S.*

The method pursued in the majority of cases of extraction of senile cataract at the Moorfield's Eye Hospital is as follows:—A drop of a two per cent. solution of **Hydrochlorate of Cocaine**, freshly prepared each day, is dropped into both eyes, every three minutes, for half an hour before the operation. Between the applications the eyelids are kept closed, otherwise the cornea is liable to become dry, rough, and flaccid. When the patient is on the operating couch the conjunctival sac of the eye, to be operated on, is thoroughly washed out, by means of an irrigator, with a saturated solution of **Boric Acid.**

The instruments, which have been carefully washed and then dipped in a **Carbolic Acid** solution of 1 in 20, are then brought to the operator in a porcelain tray containing a weaker solution of the same fluid, 1 in 100. The sponges consist of pieces of absorbent Alembroth wool moistened with **Perchloride of Mercury** lotion.

A speculum is introduced, the eye fixed by forceps, or not, according to the operator, and a section made upwards with a Graefe knife. The section, made in the sclero-corneal junction, should include quite a third of the circumference of the cornea, and have a fringe of conjunctiva bordering the cornea. This conjunctival flap has several advantages, it ensures a quick reformation of the anterior chamber and a rapid union of the wound, and thus diminishes the risks of suppuration and of the death of the cornea from want of nutrition.

An iridectomy is next made, and the capsule afterwards incised at its upper border by a single cut with the Graefe knife or with a cystitome.

The lens is expelled with very little pressure on the globe, and, in consequence, iritis very seldom occurs. When gentle pressure will

expel any soft lens matter, it is removed, but where force would be required it is best left in the capsule where it will do no harm.

After the wound is cleaned and the cut ends of the iris seen to be free in the anterior chamber, both eyes are closed by pads of Alembroth wool and a bandage, and the patient put to bed. On the following day the patient is allowed up, the un-operated eye uncovered, and the operated eye re-dressed. The operated eye, if doing well, is dressed daily for a week, when it is examined and dark glasses ordered instead of the pad. In the majority of cases the eye is quiet at the end of ten days.

During the whole of this time the ward is only in semi-darkness.

The question whether an iridectomy should be made is, at the present moment, undergoing debate amongst the continental surgeons, who extol the round and moveable pupil which they occasionally obtain without an iridectomy. As, however, the greatest good to the greatest number should be the aim of every operator, it is not likely that the iridectomy will be again abandoned, since Knapp confesses "that the operation without iridectomy is somewhat more difficult, the section larger, the lens less easily expelled, and there is greater danger of loss of vitreous, of prolapse of the iris and posterior synechiæ." The greater number of good visual results with iridectomy more than balances the appearance of the eye in the few successful cases without iridectomy.

The "rational method" of after-treatment of cataract operations and iridectomies has been practised by Dr. Charles E. Michel for twelve or fifteen years with uniform success. The method consists in the rejection of bandages, compresses, and the dark room, and the substitution therefore of a strip of gold-beater's skin applied to the lids and an ordinarily lighted room.

The advantages claimed for it by its supporters may be summarised as follows :—

1. No special room or ward is required, as daylight is not excluded and all the discomforts of a dark room avoided. The inflammatory weakening and unhealthy effect of pad and bandage to lids and adjacent tissues are done away with.

2. The lids not being covered an earlier discovery of bad results is secured, as the eye being in receipt of its natural stimulus all the time does not become photophobic, except when about to inflame.

3. Prolapse and entanglement of the iris in the wound and also astigmatism are avoided. Both these results are produced by pressure which must exist even with the lightest bandage.

4. The period of confinement is shortened, and the absence of photophobia permits an earlier return to the ordinary habits of life.

Dr. Chisholm, of Baltimore, and Mr. Simeon Snell, of Sheffield, are full of praise, after testing the "rational method." Each surgeon has, however, deviated from the original sized strip of gold-beater's skin (half an inch wide by one and a quarter inches long) which Dr. Michel uses. Mr. Snell employing an elaborately shaped piece of silk salicylated isinglass plaster (Seabury and Johnson), which is so large that it must allow the movements of the face and forehead to be transmitted to the lids, which Michel expressly warns one against.

The writer has no experience of the treatment, but it does not seem to produce better results than those obtained by the treatment carried out at Moorfields.

Lamellar Cataract.—Schöle has devised a plan of dividing the sphincter papillæ, which he finds of great benefit in certain cases of congenital cataract. Instead of performing an iridectomy, where the nucleus is small and dense, and the periphery clear and free from spokes, he simply divides the sphincter of the iris in a radial manner, thus obtaining a narrow gaping aperture which does not reach the periphery.

The method is simple; with a narrow keratome he makes an opening down and in at the sclero-corneal junction, and when the iris is washed out by the aqueous, it is divided in a radial direction by a single cut of the scissors. The iris is then gently replaced in the anterior chamber.

CATARRH. (See "Air Passages," Theraupetics of.)

CEREBRO-SPINAL FEVER, or CEREBRO-SPINAL MENINGITIS. *Alexander Collie, M.D.*

The treatment of this disease is highly unsatisfactory. Its success probably depends upon the extent to which the local inflammation can be controlled; and it may be safely said that there is no known mode of treatment which can effect this. Bleeding and purging have been employed with bad results. Quinine, the iodide and bromide of potassium, and mercurials have been given without effect. Fortunately, it is met with rarely in Great Britain, and then only in the sporadic form; but in Ireland it has occurred twice with considerable severity, and one or two groups of cases have appeared in Scotland. All the cases admitted into the Eastern Hospitals, died; but Maclagan treated thirty-four at Dundee with a mortality under 24 per cent. His treatment consisted in "warmth in bed, milk, beef tea, occasional sponging, water *ad lib.*, and an aperient when required.

The restlessness, the sleeplessness, the hard dry cough, the hyperæsthesia, and other symptoms of nervous disturbance were best treated by **Chloral** and **Bromide** draughts." Relief from pain may sometimes be procured by ice or leeches, applied to the spine, the back of the neck, behind the ears and to the temples.

For the same purpose **Opium** may be given, and when there is vomiting, **Morphia** injections should be substituted.

The writer would recommend generally the treatment employed by Maclagan, with the following in addition: (1,) a **warm bath** in certain cases of restlessness and sleeplessness, and (2,) when any tendency to collapse appears, the application of warmth to the body, in particular to the extremities, together with the liberal use of some form of **Alcohol**, as a rule, champagne.

CHICKEN-POX. (See "Varicella.")

CHOLERA INFANTUM. (See "Diarrhœa.")

CHOREA *Robert Jones, M.D.*

Has received general professional interest from the publicity given to the collective investigation inquiry, by Dr. Stephen Mackenzie, in a report to the "B. M. J.," recording 439 cases. The report shews that chorea is nearly three times as frequent in women as men, that the age from eleven to fifteen inclusive is that of greatest incidence, being nearly equal in the two sexes; the youngest was a female aged three years, the oldest also a female, aged 86 years. The great majority belong to the lower classes, but it is obvious that this class largely preponderates over the upper in point of number. Most of the patients reported upon were thin, and of only moderate strength and growth. Dr. Hadden states in addition, that there is always some paralysis and anæsthesia present in these cases. Their complexion has been fair in the greatest number; little information is obtained as to the mental condition—most were of the average capacity, some above. Of the females the majority had not arrived at the age in which menstruation usually commences, the attacks were mostly the first recorded. Rheumatism takes the lead as regards antecedent illness, for it occurred in a quarter of the cases; anæmia is the sole recorded antecedent illness in about five per cent. The exciting cause in the majority is of a nervous character, fright, mental overwork, shock, and educational over-pressure rank among these. The character of the attack is described as being severe in most, the average duration being two to three months. The cases ending fatally were two per cent.; in many of the fatal cases rheumatism had left heart disease.

Frequently a neurotic family history is obtained, generally in half the cases—rheumatism is often present in the patient's family. With regard to the treatment, good and ample food with rest were resorted to in some cases, but of the drugs in use two are especially vaunted as specifics, viz., **Arsenic** and **Iron.** Owen reports a curious bronzing of the skin after the continued administration of **Arsenic.** Frühwald recommends the use of **Arsenic** hypodermically in 2 minim doses. Yoffroy uses **Chloral.** Riess, of Berlin, strongly recommends **Physostigmine. Cimicifuga** has its advocates in Corson and others; **Tartar Emetic** in full doses is valuable in cases of acute chorea; **Conium** (succus, 1 drachm) gradually increased, has been recommended by Dr. John Harley. **Iron** is most useful in removing anæmia; **Valerianate of Zinc, Sulphate of Zinc, Belladonna,** the **Bromides of Potassium, Sodium,** and **Ammonium,** are often useful. **Digitalis** may be indicated with **Iron** in certain conditions of the heart. **Oxide of Zinc** has its advocates. When accompanied with rheumatoid pains, **Salicin** 3 grains, or **Salicylate of Soda,** have been found very beneficial. **Ether Spray** to the spine, and **Chloroform** inhalations or **Morphia** subcutaneously have been highly recommended in acute chorea. Mechanical restraint is often comfortable to the patient when the movements are violent. It is necessary to administer milk, eggs, beef tea, and wine freely to keep up the patient's strength.

COLIC BILIARY. (See "Liver.")

COLIC INTESTINAL.

See "Bismuth Salicylate," p. 24; "Discorea," p. 46; "Methyal," p. 77; "Picrate of Ammonium," p. 83.

CONSTIPATION. *Alfred G. Bateman, M.B.*

What constitutes a state of constipation? Some patients do not suffer without action of the bowels for three or four days, some can go even longer. A case of constipation is almost certainly due to one or more of three causes, putting aside the question of malignant tumours, etc., (*a*) imperfect glandular secretion; (*b*) slow peristaltic motion; (*c*) a sluggish habit of sympathetic nerves. If a patient can bear an infrequent emptying of the bowel without conscious injury or discomfort, and if any interference does more harm than good, it is clearly not our business to interfere. If, however, the reverse is the case, then the action must be prompt, and the danger averted. It is wrong, however, to give a strong dose of purgative medicine, and then follow this up with constant aperient drugs. Our aim must be to find

out the *cause* of the want of equilibrium, to restore this, and to enable the patient to live without constant dosing.

Sulphate of Iron one grain or one grain and a half combined in a pill with a quarter to a half-a-grain of **Socotrine Aloes** is an excellent remedy which will cure a great number of cases of chronic constipation. One of these pills should be taken three times a day, immediately after the principal meals. For two or three days, perhaps, the bowels may not seem to be influenced, but after that time there will be two or three actions a day; nothing approaching purgation should be allowed, and after the first *loose* motion one pill should be withdrawn, and the others should be taken night and morning. After some further period one of these can be left off, and then one every other day is sufficient, and finally this need only be taken occasionally.

Colocynth may be given instead of the Aloes in obstinate cases, but as soon as a good effect is produced the Aloes should be resorted to in its place. The treatment must be persisted in for some time and returned to where relapses take place, but in 20 per cent. a cure is the result.

Decoction of Aloes in half-ounce doses with an equal quantity of **Mistura Ferri Co**, may be used with equal benefit in cases where pills are objected to by patients.

The influence of drugs on Peristalsis.

Dr. Heise, of Munich, has obtained interesting results regarding the action of certain purgatives, by introducing into the duodenum, through a gastric fistula, a ball, which is so distensile as to occlude the intestinal canal, and to which a long narrow tube is attached. By means of this apparatus observation can be made as to the rate of motion due to peristaltic action, and by limiting the drug used to any point below the duodenum, it is determined whether a drug purges from its presence in the upper part of small intestine, or in the small and large intestines. The movements of the ball occur most rapidly in the upper part of the small intestine, and after the first hour or thereby the peristaltic movements become slower and slower.

Of the four substances tried for the rate of the peristaltic motion—**Sulphate of Sodium, Oleum Ricini, Infusion Sennæ**, and **Oleum Crotonis**—Infusion sennæ was the slowest moving, only about eight cm. in the first ten minutes, whilst in the case of **Croton Oil** 55 cm. were traversed in an equal space of time. In the experiments made for the determination of the "position for purgation" it was found that **Sodii Sulphas, Oleum Ricini, Calomel, Folia Sennæ, Oleum Crotonis, Fructus Colocynthidis**, and **Chlorate of Sodium**, *when*

limited to the upper part of the small intestine, could not produce diarrhœa, but only vomiting and increased peristalsis. When, however, the substances were introduced *below* the obstructing ball by means of a narrow tube through it, diarrhœa was at once produced, as in cases where no obstruction existed to limit the sphere of action. By these experiments it is conclusively proved that to produce purgation the purgatives named above must come into direct contact with the lower part of small intestine.

Massage has been found by M. Berne and others to act successfully in cases of chronic constipation. After kneading the abdominal tegument and muscles, slight pressure is brought to bear on the cæcal region by means of the palm of the hand, then with the clenched fist a deep massage of the colon is affected. If gall-stones are not present, slight pressure on the gall bladder is advantageous. The bladder should be empty, and of course the patient should not be pregnant, or be suffering from tumours or inflammations of neighbouring organs. It should be daily practised from fifteen to twenty minutes at the commencement of treatment.

Cascara sagrada and abdominal friction.

℞ Ext. cascaræ sagradæ, liq. ʒj. | Tinct. belladonnæ, ɱv.
Tr. nuc. vom., ɱx.

M. Fiat. Haust. To be taken every night and morning.

Dry friction being applied to the abdominal walls for a few minutes every morning. The diet to consist of porridge, brown bread, stewed fruit, with entire abstinence from tea. After a few days the medicine can be reduced in quantity, and, as a rule, the bowels act regularly after two or three weeks.

Chief conditions of healthy defecation.—Sir Andrew Clarke, M.D., F.R.S., in a practical paper on this subject states that, to ensure a healthy action of the bowels the following are requisite : (*a*) plenty of solid and liquid digestible food ; (*b*) a fair amount of refuse matters in the colon ; (*c*) regard to the promptings of nature ; (*d*) *daily solicitation at an appointed time;* (*e*) *The co-operation of expectation and will, and* (*f*) *contentment with a moderate discharge.* He instructs his patients to

(1,) Sip slowly, from a quarter to half-a-pint of cold filtered water, or hot if preferred, on first waking in the morning, and also on going to bed at night.

(2,) To take a cold or tepid sponge bath, followed by a brisk general towelling.

(3,) To clothe warmly and loosely: to see that there is no constriction about the waist.

(4,) To take three simple, but liberal meals daily, *avoiding* all coarse, hard, and indigestible foods, strong tea, and much hot liquid of any kind at these meals.

(5,) To walk at least half-an-hour twice daily.

(6,) To avoid sitting, and working long in any position which will constrict or compress the bowels.

(7,) To *solicit* the action of the bowels every day after breakfast, and be patient in soliciting. If you fail to procure relief one day, continue the daily solicitation at the appointed time, wait until the fourth day, when help should be procured.

(8,) Before having recourse to drugs, try, on waking, massage of the abdomen practised from right to left along the course of the colon; also take at the two greater meals of the day a dessert spoonful or more of the best **Lucca Oil.**

(9,) If the use of drugs be unavoidable try the **Aloin Pill.**

℞ Aloini,	gr. ss.	Myrrhœ,	gr. ss.
Ext. nucis. vom.,	gr. ss.	Saponis,	gr. ss.
Ferri sulph.,	gr. ss.		

M. Sig. Take one pill half-an-hour before the last meal of the day.

If this should give rise to a very copious motion, or to several small motions, the pill does not act correctly, and a fourth part or even less should be taken for a dose until the exact quantity necessary to ensure a daily evacuation be found; decrease the pill daily, or else take it on alternate days.

Ipecacuanha in half-grain doses may be added with good effect if the motions are hard and dry, *and if there is no special weakness of the heart.*

Belladonna in half-grain doses of the extract will relieve any griping if added to the above pill.

Sulphate of Quinine in 2 grain doses with 3 grains of **Pil. Rhei Co** taken after the last meal is often sufficient to arrest constipation.

Fecal Retention unconnected with Organic Disease.—Dr. Hays, of the New York Academy of Medicine, calls the attention of the profession to Vanni's cases of extraordinarily prolonged fecal retention, with, apparently, daily evacuation of the bowels. It is not unusual for a patient to affirm that he has had a daily stool and yet on examination to find that the bowels are but imperfectly emptied. These cases are mostly found in old people, and often lead to that most unpleasant of all operations, removal of the masses by mechanical means. The largest retentions are in the sigmoid flexure and the cæcum. Bristowe

mentions cases where the circumference of the colon measured 12 inches; and Johnston cases where it measured 30. Although old people are as a rule the sufferers from this retention it has been found in a boy of seven, and a fatal case is recorded in a man of 28; the female sex, however, preponderates at all recorded ages. The obstruction may be found to be of hardened claylike material, completely filling the rectal pouch. When fecal masses become impacted in the rectum they must be removed, either by finger or scoop. An anæsthetic is often necessary as the sphincter is in a state of spasmodic contraction and very painful. Under its influence the sphincter can be dilated widely to full extent. Let a stream of hot water be thrown against the hardened masses until partial or entire disintegration is seen. If a scoop is used it should be worked through a speculum. After removal of scybala a suppository of extract of **Belladonna** and **Hyoscyamus**, or a small dose of **Morphia** should be introduced. In all cases where this impaction is suspected intestinal irrigation should be daily performed. The irrigator, consisting of a reservoir for the water, a long flexible tube and a rectum bougie which is superior to the Higginson or ordinary syringe. The tube must be of sufficient length to allow of its free use, and the reservoir to be placed at sufficient height to cause hydrostatic pressure. The liquid is to be as near the temperature of the body as possible. Care must be taken to fill the tube with water before passing the bougie into the rectum, as otherwise air would be expelled into the bowel. The patient is to be placed on his hands and knees. As much as seven or eight pints may be thrown up without causing any discomfort. By adhering to the hand and knee position and using irrigation instead of an intermittent flow from an ordinary syringe, it is always possible, where no disease of the bowel exists, to bring the liquid introduced into contact with the hardened feces *however high up these may be situated.* The rectal bougie must be passed to some 12 or 18 inches above the anus. Some part of the fluid will then come away, bringing with it more or less of the fecal matter; the remainder will be retained, varying in quantity with the condition of the colon. *The patient is then to be left at rest for several hours*, and hot water bags are to be applied to the abdomen. An ounce or two of **Castor Oil** may then be administered, gentle massage of the abdomen performed, and just before the oil is expected to operate another **Enema** is to be given in the manner already indicated. Large quantities will then come away—perhaps accumulations of months—with very slight discomfort to the patient.

Diet.—No system of diet can be tabulated to suit every case, the

aim should be to secure perfect digestion and absorption and natural peristalsis. Vegetable diet produces abundant, and animal diet scanty stools. Excess of vegetable food, however, often induces constipation by overloading the bowel. Dr. Habershon reports a case of constipation from the habitual use of coarse brown bread.

Water.—The injection of too small a quantity of water often causes retention of fecal matter. A mineral water such as **Apollinaris** although non-laxative in itself, is more palatable than ordinary drinking water, and is more readily taken by patients. Hot fluids, such as coffee or milk, often set in action the bowels, but strong tea has a constipating action as a rule.

Exercise.—Riding, walking, tennis, rowing, and, indeed, all exercise in open air, is most useful, and great good often follows judicious use of dumb-bells and extension pulleys. Very violent exercise, accompanied by profuse perspiration, is hurtful, and induces constipation.

Interference with Habits.—This is often the cause of disorder. The routine of the daily solicitation of the bowels being broken into by travelling or business engagements must be regained as soon as possible.

Climate.—Differing degrees of humidity of the atmosphere have close relationship to constipation and diarrhœa.

Electricity.—This is an important agent in restoring tone to the walls of the bowels and abdomen, but requires constant use. An insulated electrode may be introduced into the rectum, whilst a large sponge electrode is passed over the abdomen. The interrupted current is to be employed.

Cold douches and compresses to abdomen are also useful, and in cases where the abdominal walls are very lax, an *Abdominal Support* is often of value in preventing constipation.

Castor Oil can be disguised in hot coffee, hot milk flavoured with cinnamon, or in the froth of ale or porter.

Aloin acts as a cholagogue, and can be combined thus usefully :—

℞ Aloini	gr. ¾	Ext. Hyoscyami	gr. ix.
Mass Hydrarg.	gr. vj.		

M. Pil. iij. Sig. One at night as required.

This does not induce griping, and may be repeated in twenty-four hours in "bilious attacks."

Another combination, recommended by Dr. Hays, is :—

℞ Aloini	gr. ¾	Ext. Hyoscyami	gr. vj.
Pulv. Aromat.	gr. ix.		

M. Pil. iij. Sig. One at night.

For cases where a mercurial is inadmissible the above is most useful.

Rhubarb.—A valuable remedy, especially in children, for unloading the bowels; it is best administered in form of *compound powder* or the *aromatic* syrup.

Podophyllin is uncertain in its action, especially in women, and griping, requiring **Hyoscyamus** and **Belladonna** as an adjunct. A great authority, Dr. Dujardin Beaumetz, writes :—"**Podophyllin** determines severe bodily pains, and I have been obliged to abandon it for this reason." The tincture lately introduced into the Pharmacopeia is a better preparation than the resinous extract, and the alcohol in it prevents the discomfort caused by the pill form.

Strychnine is the most important of all drugs used for restoring the muscular tone of the intestines. It may be combined with **Aloin** and **Belladonna** with advantage.

℞ Aloin	gr. ½	Ext. Bellad.	gr. ¼
Strych. Sulph.	gr. $\frac{1}{60}$	Pulv. Ipecac.	gr. $\frac{1}{10}$

Sig. One at night.

If this acts too freely decrease the dose, as it should only induce healthy and natural stools.

Ipecacuanha is classed by Dr. Brunton as a powerful hepatic stimulant. Dr. Ringer states that it possesses some purgative action, which it exerts by increasing the production of mucus. One grain may be given before breakfast to relieve constipation, depending on great torpor of the intestines :—

℞ Ipecacuan. pulv.	gr. i.	Piper Nigræ pulv.	gr. ss
Nucis Vomicæ pulv.	gr. ss	Ext. Gentian	gr. i.

Sig. One before breakfast.

Physostigma, used in cases of torpor of the intestines. Dr. Hays recommends in constipated cases, where the spinal cord is irritable :—

℞ Ext. Physostig.	gr. ss	Ext. Ergot.	gr. xij.
Ext. Bellad.	gr. ij.		

Mist. Pil. No. vj. Sig. One at night.

Arsenic is of service in constipation dependent upon catarrhal conditions of the stomach and intestines. It can be given in form of **Fowler's Solution,** in doses of one or two drops three times a day, largely diluted, and persisted in for some time.

In cases of "Bilious attacks" the following is recommended by Dr. Hays :—

℞ Sodæ Phosphat.	℥ss	Ext. Cascaræ Sagr.	℥ss
Aqua Bull.	℥jss	Elix. Aurantii	q. s. ft ℥iv

M. Ft. Sol. Sig. One ounce at bedtime.

Sulphur is a mild laxative, useful in cases where hæmorrhoids complicate the constipation

Hypodermic Purgation.—**Sulphate of Magnesium** was recommended by Luton, after experiments upon himself and patients ; it is stated that in hypodermic doses of ten centigrammes it produced diarrhœic stools. It has not been so successful in the hands of others.

Colocynthin.—This, the glucoside of colocynth, in the hands of Dr. Hays, in hypodermic doses of one third grain with one grain of **Cocaine**, has caused a diarrhœic action of the bowels.

CONSTIPATION IN CHILDREN.

In infants and very young children this affection is usually cured without resorting to medicines. A careful investigation into the diet and the stools will generally enable us to discover the cause of this disorder, and to remove it. The number of evacuations consistent with normal health vary with the temperament. Dr. Day states that bilious and plethoric children require a daily evacuation, or their health will suffer ; whereas the neurotic might, without inconvenience, have none for days together. It is important with the child, as with the adult, to have a stated time for the "daily solicitation." A milk diet often predisposes to constipation. If the food be concentrated, and quickly and fully digested, very little fecal matter will be produced. The most notable symptoms of retained fæces are dullness of manner, lowness of spirits, indisposition to move, frontal headache, thirst, furred tongue, loss of appetite, and sallow complexion. The abdomen then becomes distended, the diaphragm descent is impeded, and the child becomes restless and uneasy, and more or less in pain. Sleep is disturbed, and dreaming is common. If scybala collect intense effort is made to remove them, and the heavy straining only brings away a few lumps, covered with mucus and stained with blood. There is often diarrhœa and intestinal irritation. Habitual constipation should be considered, in default of other causes, to be due to improper feeding, and this removed by alternative diet. Bran, oatmeal, Indian corn, are all excellent laxatives, provided that they do not impede digestion. All children should be allowed to drink freely of well boiled, well filtered water : too small an amount of fluid during the day is often the cause of constipation.

Enemas are not sufficiently used. Simple enemata of **Soap and water**, or **Olive Oil and water**, relieve the loaded rectum, and prevent resort to medicines. Only a small quantity should be thrown up at a time—about two ounces—and repeated twice or three times in the 24 hours. When simple enemata fail Dr. Starr recommends one teaspoonful of **Oil of Turpentine** or **Castor Oil**, two teaspoonfuls

of **Olive Oil**, the **Yolk of one Egg** thoroughly mixed, and **Warm water** to four ounces.

Castor Oil.—This, according to Dr. Brunton, increases the watery secretion of the intestine, and effectually "flushes" the bowels. In young children it is a sure and good purgative. Begin with small dose.

Podophyllin.—Where the motions are chalky, as in cases of scanty secretion, during dentition in hand-fed children, give three drops on sugar occasionally of the **Tinct. Podophyllin, B.P.**

Strychnia. — In doses of a few drops the **Tincture of Nux Vomica**, is most useful in cases, according to Dr. Day, of relaxation and want of nerve power. In Anæmia with **Iron** it is most valuable, and the addition of a little **Decoction of Aloes** helps to stimulate the larger bowel.

Belladonna.—To be given where constipation is attended with flatulence or colic. Children bear large doses well.

Nitric Acid.—Where constipation arises from torpidity of liver, and when combined with **Taraxacum**, this is most useful.

Calomel.—Useful in cases where bile is deficient. Dr. Day gives as indications for treatment scanty and high coloured urine, furred tongue, frontal headache, irritable temper and loss of appetite. If, however, mercury rapidly produces a depressing and injurious effect, causing anæmia, lassitude, and general "flabbiness," in ricketty or strumous cases, where motions are pale grey and hard, Dr. Day states that mercury would be absolutely injurious, and recommends in its place a powder of **Rhubarb and Soda**, a dose of **Castor Oil**, or one of Squire's **Essence of Sagrada.**

Sulphate of Magnesia.—In plethoric cases, where the liver is inactive, a few grains in **Peppermint Water**, with a little **Syrup of Ginger** and **Tincture of Cardamom** is very useful.

Regular Exercise and cold or tepid bathing daily will help to keep away constipation, but, as with adults, so with children, excessive exercise or tiring pursuits induce inactive bowels.

Malt Extract.—A teaspoonful of Kepler's **Extract of Malt**, in a little milk, or small quantity of seltzer or soda water, acts as an aperient in some cases, taken three times a day, after meals.

Tamarinds.—In form of confection, with **Senna** and **Tartaric Acid**, flavoured with **Oil of Anise** and **Lemon.**

Sulphur.—Mild laxative ; not difficult to give in milk, and most pleasantly administered as the compound liquorice powder.

Cod Liver Oil.—In small doses of from 10 to 60 drops, according to the age of the child.

Calcined Magnesia.—This should never be given, as it is so insoluble as to serve as a nucleus for intestinal concretions.

References.—Dr. Kent Spender, "Practitioner," March, 1887, p. 161. Dr. Heise, "Deut. Archiv. f., Klin Med." vol. 40, part 1. Dr. Davis, "Lancet," Dec. 1885. Dr. Berne, "Société Médico Pratique." Dr. Day, "Medical Press and Circular," May 11th, 1887. Sir Andrew Clark, Bart., F.R.S., "Lancet," January 1, 1887. Dr. Cheadle, "Lancet," Dec. 11, 1886. Dr. Hays, "New York Medical Journal."

CONSTIPATION—In Women. *John W. Taylor F.R.C.S.*

The most generally useful pill is the following :—

℞ Ext. Aloes Aquos. gr. iij | Ext. Belladonnæ gr. ½
One Pill (or half a pill—or a quarter—or less as required) to be taken every night.

This pill if taken as directed and followed every morning by a defæcatory effort at a fixed time rarely fails in the most obstinate cases of constipation. Its aperient effect tends slowly to increase, and the dose may be gradually decreased, but taken daily until a regular habit is fully established.

CONVULSIONS—In Children.

When caused by the *fever resulting from a chill*, **Aconite** should be given every half-hour. *When due to reflex irritation of teething*, **Belladonna** is useful, both as a remedy and as a prophylactic. In these cases **Bromide of Potassium** is also of great service. (Dose 2 to 5 grains three times a day.) *When due to reflex irritation from intestines*, Phillips recommends small doses of **Ignatia.** Another useful remedy is **Chamomile Oil** or **Tincture.** This appears to be indicated when the teething is associated with intestinal irritation ; there is frequently diarrhœa, the stools being of a greenish colour. When indigestible food is the exciting cause, **Mild Laxatives** must be given. At the onset the child should be placed in a "Hot Blanket Pack," as recommended in the "Medical Annual, 1887," p. 83.

CORNEA (Diseases of). *Wm. Lang, F.R.C.S.*

In *interstitial keratitis* due to inherited syphilis, Abadie has found that a sub-cutaneous injection of **Perchcloride of Mercury** is very successful in combating this very intractable disease. He injects 20 drops of the following solution every other day, beneath the skin of the back.

Hydrarg. Perchlor., 1 part ; Sodæ Chlor., 2 parts ; Aq. destil, 1000 parts.

Care should be taken to plunge the needle well beneath the skin,

otherwise severe local irritation is likely to be produced. After the injection slight friction should be applied to diffuse the solution amongst the cellular tissue.

In nervous subjects, it is not well borne, producing considerable malaise; this can usually be prevented by first injecting a few drops of **Cocaine.**

Abadie finds the same treatment successful in the late stages of syphilis, where isolated paralysis of ocular muscles occurs, such as a muscle supplied by one branch of the third nerve.

Phlyctenular Keratitis.—Since it is probable that most, if not all, of the diseases of the cornea are due to various germs behaving in different ways, it is interesting that Burchardt's experiments have proved that phlyctenular keratitis, the so-called strumous keratitis or strumous pannus, is due to a coccus which he has succeeded in cultivating from a phlycten of the cornea.

The author arrives at the following conclusions : In corneal phlyctenulæ there is present, in comparatively small numbers, a coccus which very closely corresponds with the coccus flavus desidens of Pflügge. It is probable that this coccus is the constant and only cause of phlyctenular conjunctivitis. Since the cocci can be got rid of with the least loss of substance by the galvano-cautery, this offers the best mode of treating corneal phlyctenulæ. Facial eczema and blepharitis, if present, must be treated at the same time. After the cauterisation of the phlyctenula, the author recommends irrigation with a solution of **Boric Acid,** and dusting with **Calomel** daily.

Katzaüroff found that **Iodol** was decidedly beneficial in seven cases of phlyctenular keratitis out of eight where he tried this drug.

Perforating Corneal Ulcers.—In all forms of corneal ulcers where there is a tendency to perforation, **Eserine** should be vigorously used, one drop of a 2 grain to the ounce solution being put in the eye every four hours.

Should this treatment fail, or should the ulcer have perforated before the case comes under treatment, Dr. Gama Pinto recommends the following operation.

The prolapsed iris is separated from the edges of the perforation with a probe, and having been well drawn out is cut off. A piece of conjunctiva about twice the size of the perforation is then dissected off the same eye ; this is laid upon the wound with its raw surface downwards, and with a probe is gently pushed into it, thus forming a plug. The eye is closed with a pad and bandage, which is not disturbed till the third day.

The object of this treatment is to avoid an anterior synechia, which often gives rise to repeated attacks of iritis or to secondary glaucoma, if the prolapse is not excised: and also to hasten the closure of the ulcer, which, under ordinary circumstances, is very slow to heal when the prolapse is removed.

Hypopyon Ulcer.—In these cases we have to deal with a germ which, by its rapid growth, may destroy the whole cornea in a few days. Fortunately we have, in the galvano-cautery, a means of destroying these germs which are to be found in the grey margin of the ulcer.

The treatment consists in washing out, by means of an irrigator, the ulcer and the conjunctival sac, with a solution of **Perchloride of Mercury**, 1 in 3,000. If a mucocele be present, it must be treated in the manner decribed under the heading *lachrymal apparatus*, otherwise the pus escaping from the sac will re-infect the ulcer and cause a relapse. The edge of the ulcer is then thoroughly cauterised, the whole of the grey margin being destroyed. If the floor of the ulcer is very thin it may be perforated by the cautery, thus allowing the aqueous and hypopyon to escape; but if the floor is thick and the hypopyon large, it is better to divide the base of the ulcer by a Saemisch section: that is, to transfix the cornea from one margin of the ulcer to the other, and cut out.

When the hypopyon is small, it will in all probability be soon absorbed under the influence of **Atropine Drops** and hot **Boric Acid** fomentations kept constantly applied.

The best form of galvano-cautery is one made for the writer by Messrs. Weiss; it is very simple, and works with a very weak battery. Where this is not available, Mr. Simeon Snell advocates the use of a small platinum bulb cautery (Weiss), which can be heated in a spirit lamp. After the cauterisation, he dusts the ulcer with finely powdered **Iodoform**, and this he repeats twice a day.

Where neither form of cautery can be obtained, the ulcer should be thoroughly scraped with a sharp spoon—a diminutive Volkmann's—then irrigated for several minutes with a powerful stream of 1 in 2,000 solution of **Perchloride of Mercury. Iodoform** is dusted in the eye, and the case then treated by **Atropine Drops** and **Boric Acid** fomentation.

Cocaine is usually a sufficient anæsthetic in carrying out these various kinds of treatment.

Corneal Opacities.—The treatment of scars left in the cornea after ulceration or inflammation has always been unsatisfactory. Never-

theless one is occasionally rewarded for the prolonged use of massage to the cornea, by the restoration of fair vision in a previously almost useless eye.

The procedure consists in placing a small piece of yellow **Oxide of Mercury Ointment**—1 grain to a drachm of **Lanolin**—between the lids, and then with the forefinger rubbing the upper lid lightly, but rapidly, over the cornea in a radial direction from the centre of the latter. This has to be continued for two minutes each day as long as any improvement continues. Since this may have to be continued for four or five months, the patient should be instructed in the method of carrying out the treatment.

Dantziger has shown that the sphere of usefulness of this treatment can be considerably enlarged if the opaque corneal tissue be previously removed by scraping. The employment of massage during cicatrisation will prevent the newly deposited tissue from becoming opaque. The operation can be performed under the influence of **Cocaine**. The reaction is generally considerable, and usually lasts from five to eight days. Massage must be commenced as soon as the epithelium re-forms. Cases are unsuited for the treatment by massage if the ensuing injection does not quickly subside.

Transplantation of Cornea.—Hitherto cases of dense leucoma of the cornea have resisted all treatment. Where transplantation has been tried, failure has hitherto followed, the graft invariably becoming opaque, even after union has taken place.

Von Hippel, of Giessen, has succeeded, however, in transplanting a piece of a rabbit's cornea, four millimetres in diameter, which remained clear eight months after the operation, and gave vision of six-sixtieths.

His plan was to trephine the opaque cornea, leaving Descemet's membrane intact and to remove all the opaque tissue. With the same trephine he now cut out a piece of the whole thickness of a rabbit's cornea, and laid it in the wound on the exposed Descemet's membrane. The eye was bandaged for thirteen days and then uncovered, the vision being the same as it was eight months later.

This plan of treatment is only suited to corneal opacities which exist together with a perfect Descemet's membrane—that is to opacities which have not followed perforation of the cornea.

CORNS

N. Whitelaw Bourns, M.D.

Have almost entirely come down to "over the counter" treatment, and every druggist will be found to possess a "painless cure," a

"perfect cure," or a "seven days' cure;" and in all cases **Salicylic Acid** is the active ingredient. The following is a very useful formula:

℞ Acid salicylic, 30 pts. | Ext. cannabis sativa, 5 pts.
Collodion, 100 parts M.

To be applied with a camel's hair brush once a day for a week.

CORYZA. *Prosser James, M.D.*

Is the nature of common catarrhs generally understood?—Dr. J. H. Whelan, R.N., writing in "The Practitioner," asks this question and replies to it in the negative. Is it he says (1,) a specific poison comparable to that of the infectious fevers; or (2,) does the affection start as an idiopathic inflammation and develop a specific poison, which is given off by the breath; or (3,) is it of purely nervous reflex origin. Dr. Whelan refers to Bürger's discovery of micrococci in catarrhal secretions, and considers them to be possible factors in the affection. He suggests that they or their spores are distributed nearly universally in the atmosphere, and are carried by fomites, that in their usual state they are unable to attack healthy mucous membranes, but that there is a condition in which the trophic nerves of those membranes become depressed, and lose their tonic action by the action of poor blood or from the periodical neurasthenia of hereditary neurotics, and that by feeding in such pastures the progeny of the attacking catarrhal micrococci become so virulent as to be able to attack successfully the healthy membranes—the latter being inferred from what Pasteur has shown us by his experiments are the intensive effects of culture on some micro-organisms. On these assumptions Dr. Whelan bases his treatment of catarrh. Coddling he considers a mistake except in the very young, aged, or delicate. He advises plenty of food and some light wine, but no spirits or tobacco. He discountenances depressants such as Dr. Jukes Styrap's mixture containing morphine, antimony, and potassium citrate; opium, iodides, bromides, and antiseptic inhalations or spraying, all receive but little favour. As a specific which will cure a cold in, at the longest, three days, Dr. Whelan recommends the following:—

℞ Quininæ sulphatis	gr. xviij	Extracti gentianæ	gr. xx
Liquoris arsenicalis	♏ xij	Pulveris gummi acaciæ q.s. ut fiant	
Liquoris atropinæ	♏j	pilulæ xii	

Sig. One every three, four, or six hours according to circumstances.

Dr. Frontis subscribes to the opinion of Dr. Lees that acute coryza is essentially a neurosis of the vaso-motor nerves and, like him, advises full doses of **Bromides** and **Belladonna** in the early stages to relieve congestion and hyperæsthesia. He recommends that belladonna should be given in the form of atropia $\frac{1}{100}$ grain every four or

six hours until three or four doses have been taken. Caution is advised in giving it for the first time to patients, as otherwise a condition more disagreeable than the original cold may be produced. In the second stage Dr. Frontis thinks it best to favour secretion by giving **Quinine** 1 to 2 grains, and **Dover's Powder** 2 to 5 grains, every three or four hours. **Ammonia** may be inhaled to favour secretion, or an occasional dose of **Salicylate of Ammonia** given as advised by Cohen. For obstruction in the nasal passages a douche containing a teaspoonful of **Sodium Chloride** to half-a-pint of warm water is recommended.

Dr. Krakauer treats catarrh by inserting in each nostril a small plug of cotton wool (about an inch long) saturated with a 5 to 10 per cent. solution of **Cocaine** or a ten per cent. solution of **Menthol.**

M. Ruault has found good results from the internal administration of **Sodium Benzoate.** He gives it in doses of from 4 to 6 grammes. Expectoration is produced in one or two days, and the secretion dries up two or three days later. By administering the drug at the beginning of the affection he has generally effected a cure in seven or eight days.

In reference to the foregoing notes the writer would state that in his own person he can usually cut short a cold by a dose of **Morphine** at first, as was recommended by the late Sir T. Watson and others. In another member of his family this treatment fails. With regard to **Belladonna,** that will control the secretion and rapidly relieve in the second stage. **Atropine** is the most reliable preparation, but for the first time should be given with caution. A person obliged to go out may derive much comfort from a combination of **Morphine and Atropine.** Warm inhalations are valuable in the early stage, provided the patient can keep in doors. **Cocaine** applied locally will sometimes cut short a rhinitis. If it fails after two or three applications it is useless to persevere. **Menthol** inhalations seem to soothe the irritation, and can be easily used anywhere with one of the small tube inhalers. This being a dry inhalation, the precautions to be taken when using steam are not required.

See "Air Passages," Therapeutics of; also, "Alstonia," p. 11; "Pulsatilla," p. 84.

CROUP AND DIPHTHERIA.

Prosser James, M.D.

Under these names there are always suggestions more or less useful and novel: generally *less* in each case, and old remedies which have been tried and are still being tried, which have failed again and again, are continually being brought forward. It would be no

easy task to catalogue them, and would serve no useful purpose. Their etiology and pathology have been previously discussed. We content ourselves this year with reporting some recent statements chiefly from a therapeutical stand-point.

Dr. Verner speaks well of the following treatment which he found very successful during an epidemic in the Gulf of Finland. For young children he dissolved ¼ grain of **Bichloride of Mercury** in 5 ounces of water; for older children, ⅓ grain in 7 ounces of water; for adults, ¾ grain in 16 ounces of water.

These quantities were taken by the different patients in from twenty to twenty-four hours, in convenient doses and at convenient intervals. Milk diet only was allowed. Inunctions of **Ichthyol** were ordered three or four times daily. **Antipyretics** (Antipyrin) were given in enemata, and the digestion as carefully conserved as possible.

Dr. Stepf recommends **Iodide of Potassium** combined with **Tincture of Iodine.** He gives a two to four per cent. solution of the iodide to children under three, and a four to ten per cent. solution to older children—a teaspoonful being given hourly.

Dr. P. Hesse ("Medical News") calls attention to the value of **Bromine** as a local remedy, and recommends for inhalation the following solution: pure **Bromine, Potassium Bromate,** āā 1 to 2 parts; **Distilled Water,** 400 parts. Certain precautions and limitations in the application of this treatment are indicated, viz.: (1,) Treatment to be instituted as early as possible. (2,) Direct application by the brush should not be made. (3,) The frequency of application, and the concentration of the solution used for inhalation should be conditioned by the severity of the case, and the degree of congestion induced in the pharyngeal mucous membrane. (4,) The solution should always be fresh, and the treatment should be accompanied by ice-cold applications to the neck. (5,) The method is contraindicated in laryngeal diphtheria, in bronchitis, and in affections of the lungs.

Mr. N. E. Davies believes that **Iron** has a specific power of arresting the septic action of the poison in the system if applied locally in the early stage—the only stage in which he thinks local treatment can really avail. He gives a mixture containing 6 drachms of **Tr. Ferri Perchlor.** to 6 ounces of sweetened water, and at this strength, *undiluted*, insists that the child shall take every hour for twelve hours a dessertspoonful (more for an adult), and that this dose shall be repeated, whether vomiting occurs or not. He then reduces the dose and extends the intervals, keeping up the strength with strong beef-tea, port wine, and milk, or, if these cannot be taken, by the adminis-

tration (every four hours) of enemata composed of equal parts of beef-tea, port wine, and cream or milk.

Dr. Reierson, of Copenhagen, to maintain the patency of the nasal passages and lessen nasal troubles, passes medicated bougies which melt in an hour. For large children and adults they are three-and-a-quarter inches in length and one-fifth of an inch in diameter. The formula is **Cocaine Hydrochlorate** $\frac{1}{8}$ to $\frac{1}{5}$th grain, **Boric Acid** 15 grains, **Starch** and **Powdered Acacia** each 1½ grains, and **Glycerine** sufficient. For young children the bougies are shorter, and contain $\frac{1}{12}$ grain of the cocaine, or less, and 10 grains of the boric acid. The bougies are stiff, and pointed at one end. One is introduced into each inferior meatus, and reaches as far as the naso-pharynx.

Dr. Galicier gives **Digitalin** and **Sulphide of Calcium** internally. He orders the following pills:

℞ Sulphide of Calcium, 0·05 grammes | Arseniate of Quinine 0.001 grammes
Digitalin 0.001 grammes | M. Fiat. Pil.

S.—Take one every hour, day and night, for two days.

Dr. Cuq claims to have saved two children by this treatment. Neither he nor Dr. Galicier claim that no poisonous symptoms were ever produced by the remedy.

Misrachi has tried benzoate of sodium internally, but found it useless, although his earlier cases seemed benefited.

Dr. Lektorsky says that he has obtained the best results in diphtheria of the fauces from internally administering the following mixture:

℞ Decocti Quinæ Ex. ℥j. in ℥v. | Syr. Quinæ ℥j.
Chloratis Potassæ ℥ss. to j.

M. A teaspoonful every two hours.

At the same time, he paints the parts affected every two hours (alternately with the mixture) with a solution of **Iron** and **Carbolic Acid**, prepared after this formulæ:

℞ Liq. Ferri Sesquichlor. Gtt. x | Glycerinæ, Aq. Destill. āā ℥ss
Acid Carbolici gr. v | M.

In obstinate cases he also irrigates the parts (before painting with the solution), by means of a syringe, with **Lime-water**, in order to accelerate the separation of false membranes and detritus.

M. Barbot commends Renou's method of treatment, which he applies by means of **Fumigations**. His method is to place on a petroleum stove an earthen pot full of boiling water into which is put a tablespoonful of Renou's liquor every two hours for adults, and every

three hours for children from one to ten years ; a constant temperature of 20° to 25° C. (68° to 77° F.) is maintained in the room, or still higher if possible. In large rooms he surrounds the patient's bed with large sheets nailed to the floor, thus forming a small room, in which a high temperature may easily be maintained. The patient's throat is never touched. The patient is nourished with roasted meat, boiled eggs, soup, milk, and good wine.

Dr. Schenker reports favourably on the treatment of diphtheria by vaporisations of **Turpentine** and **Coal-Tar** in accordance with Dr. Delthil's directions which are as follows :—"A mixture of 1 kilogramme (2 pounds) of coal-tar, 8 tablespoonfuls of oil of turpentine, 8 grammes (2 drachms) of resin of benzoin, and 100 grammes (3½ ounces) of cajeput oil ; or a mixture of 200 grammes (7 ounces) of coal-tar and 80 grammes (2 ounces and 6 drachms) of oil of turpentine ; or turpentine alone, are continually burnt in the sick-room." Dr. Schenker claims that the vapours do not cause coughing, and are generally well borne both by the patient and his attendants. They will, he says, dissolve the exudations and arrest the diphtheritic process in its progress, assist the effects and materially secure the success of tracheotomy, should this operation ever become necessary, and will, at the same time, protect the attendants of the patient against infection.

Dr. Percy Wilde saturates the atmosphere of the room with the vapour of **Eucalyptus** (by means of a steam-kettle), and gives **Phytolacca Dec.** internally. (See p. 82 and "Dictionary of New Treatment," 1887, p. 113).

Dr. Edward Penny, as the result of his experience of 150 cases in country practice, draws attention to the large proportion of exceedingly mild cases. He has sometimes seen, on the first day of illness, a small patch of membrane on the tonsil, while on the following day would be present only a slight patch of excoriation where the membrane had existed, and on the next day again even this had disappeared, and the surface appeared smooth and even. In the convalescent stage the tonsils often remained enlarged, and remnants of membrane lurking in the crypts gave an aspect closely resembling follicular tonsillitis—in some cases to such an extent that it was not possible to distinguish between the two diseases when the throats were seen for the first time at this stage.

REFERENCES.—Dr. Verner, "Nouveaux Remèdes," No. 19, 1886 ; Dr. Stepf, "Deutsche Medicinische Wochenschrift ;" Dr. P. Hesse, "Medical News," May 1, 1887 ; Mr. N. E. Davies, "Lancet," April 10,

1887; Dr. Reierson, "Journal of Laryngology," Jan. 1887; Dr. Galicier, "Archives de Pharmacie," Sept. 5, 1886; Dr. Cuq, "Moniteur Thérapeutique," August, 1885; Misrachi, "Bull. Gen. de Thérapeutique"; Dr. Lektorsky, "Russkaia Meditzina," No. 43, 1886; Dr. Schenker, "Der Fortschritt," Feb. 5, 1887; "Correspondenz—Blatt. für. Schweizerische Aertze," vol xvi, 1886; "London Medical Record," April 15, 1887; and Dr. Edward Penny, "British Medical Journal," July 3, 1886.

CYSTITIS—in Women. *John W. Taylor, F.R.C.S.*

See also "Vesical Catarrh."

For prevention after operation: The use of glass catheters is recommended. (Taylor, "Birm. Med. Rev.," June 1887.) Catheters with stopped ends advised by Tait ("Mid. Med. Soc., 1886-7).

For the treatment of Cystitis :—

Iodoform Bougies (5 grains in each) inserted by the urethra and allowed to dissolve in the bladder. ("Liverpool Med. Chir. Journal," 1886).

Injections:—(1,) **Borax, Boracic Acid, Boroglyceride** are soothing and antiseptic. (2,) **Quinine, Carbolic Acid** and **Corrosive Sublimate Solution** ($\frac{1}{1000}$) are most powerfully antiseptic. The last generally causes some pain. (3,) **Nitrate of Silver Solution** is stimulating and antiseptic. M. Blanc reports a case of severe cystitis during pregnancy, which resisted all ordinary treatment, but was finally cured by injections of a two per cent. solution of **Nitrate of Silver** in distilled water. This solution is a strong one and is liable to cause severe pain. The necessity for the use of distilled water is also a practical objection. A method of using nitrate of silver, which has been employed by the writer with success, is as follows: An injection is used of quinine (gr. j ad. ℥j) dissolved in ac. nit. dil. (♏j ad. ℥j. A small bottle is given of nitrate of silver solution (10—30 grs. ad. ℥j) and of this a small quantity (*increasing by one drop each day*) is added to each injection. The initial dose may commence at a single drop, and the final dose is decided in each case by what the patient can bear and the effect produced.

DRUGS:—**Diluents** and **Belladonna** are the most reliable as aids to treatment. **Boracic Acid** (grs. x bis. die) has been advised. (See "Annual," 1887.) **Napthaline** (grs. j.—iv t. d. s.) is said to have proved useful. **Collinsonia Canadensis** (Tinct. ♏ xx ad. ℥ij) is recommended by Dr. Shoemaker in the "Brit. Med. Jour." of Oct. 1, 1887, for acute cystitis in combination with aconite and morphia.

Cystotomy is the resource when drugs and injections fail, and

should not be too long delayed when necessary. In women the bladder is easily opened from the anterior vaginal wall, the finger is passed into the bladder, any stone or foreign body removed, any tumour or other morbid condition noted and examined, and the wound is kept patent by the daily passage of the finger. There is but little difficulty in closing such a fistula; the difficulty—if any—lies in keeping it open.

DANDRUFF (*see* Seborrhœa).

DERMATITIS *N. Whitelaw Bourns, M.D.*

Is characterised by the usual symptoms of inflammation (redness, heat, swelling, itching, or pain), and the disease may owe its origin to local irritants, or to the ingestion of certain articles of food, drugs, or poisons.

The lesion may be a very trivial one, as a slight erythema, or it may run on into the more grave condition of bullæ, pustules, or even into gangrene. Five varieties of the disease are described, viz., *dermatitis calorica; d. gangrænosa; d. traumatica; d. venenata;* and *d. medicamentosa.* The following are the drugs which most frequently produce medicinal eruptions, **Arsenic, Belladonna, Bromides, Chloral Cannabis Indica, Copaiba, Cubebs, Digitalis, Iodine, Mercury, Opium, Phosphoric Acid, Quinine, Salicylic Acid, Santonine, Strychnia, Tar, Carbolic Acid,** and **Turpentine.** (Duhring, "Diseases of the Skin.")

The treatment consists in the removal of the cause with soothing applications. Duhring speaks highly of a lotion of **Grindelia Robusta,** one drachm of the fluid extract, in 4 or 6 ounces of water. For recent burns McCall Anderson has used a 5 per cent. solution of the **Hydrochlorate of Cocaine** with good results, and he suggests that a much stronger solution may act still better.

Bulkley uses the following ointment:

℞ Acidi Tannica, ʒj | Unguenti aquæ Rosæ, ʒj
Mixt. et ft. unguentum.

And points out that there is more danger of doing too much than too little.

DIABETES. *Robert Saundby, M.D.*

Before discussing the treatment of diabetes, it is well to have a clear understanding as to what the disease is, and how far or under what circumstances it may be curable. Diabetes may be briefly defined symptomatically as thirst, urine increased in quantity containing glucose, and wasting. It is hereditary, but Cantani believes that

nearly half the cases are due to abuse of sweets and farinaceous food. Charcot says it is more common in the beer drinking than in the wine drinking districts of Germany. The late Dr. Heslop used to say that he met with a specially large number of cases in the Burton district of Staffordshire. It is known to be very common among Jews. Among causes capable of directly exciting it are blows on the head, back and abdomen, serious falls, organic brain disease, hepatic abscess, and mental emotion. It occurs at all ages, is more common in males than females, but is rare at the extremes of life. Before middle life it is an acute and fatal malady; after middle life it is usually chronic, and in many cases curable. The form associated with the climacteric period in women is said by Mr. Lawson Tait to be especially benign, four out of six cases recorded by him having recovered completely without other treatment than Opium, no dietetic restrictions having been insisted on. (Lawson Tait, "Practitioner," June, 1886).

The pathology of diabetes is still obscure. Since Claude Bernard's time, we have known that injury to the floor of the fourth ventricle near its lower end causes glycosuria, while it has been conclusively shown that the quantity of sugar passing into the urine depends upon the amount of liver tissue functionally active, for on cutting away or ligaturing successive portions of the liver in an artificially diabetic animal, the glycosuria progressively diminishes.

The principal source of the sugar is the saccharine and starchy matter taken as food; but when these articles are withheld, a very large quantity of sugar, often as much as pounds daily, may be excreted. How the liver manufactures sugar is not yet ascertained beyond doubt. The prevalent theory has been that the liver normally converts the sugar and starchy matter into glycogen, which is then slowly converted by a ferment in the blood into sugar in such quantities as can be burnt off in the lungs into water and carbonic acid; but in disease, owing to excessive afflux of blood to the liver, in consequence of vaso-motor paralysis, or to the presence of an excess of ferment in the blood, sugar is formed in excess and appears in the urine. Modern observations, however, make it more probable that the conversion is a function, not of a blood ferment, but of the activity of the hepatic cells. Seegen has shown that the liver has the power of converting peptone into sugar, and this explains the glycosuria (Seegen, Pflügers Arch., xl. p. 48), which persists when sugar and starch are cut off. The liver is not the only possible source of sugar, as this substance is formed as a product of the catalytic changes in muscle, but the amount

produced in this way is probably never sufficient to account for diabetes.

The pathogenesis of the cardinal symptoms is less open to question. The presence of the excess of sugar in the blood is undoubtedly the cause of the polyuria and thirst, while the practical starvation which result from the non-assimilation of all the saccharo-farinaceous and part of the proteid food sufficiently explains the emaciation. By carefully withholding saccharo-farinaceous food, we may, and usually do, succeed in reducing the polyuria, and with it the total amount of sugar excreted, while the drain of water being at the same time diminished, thirst is greatly allayed, and, a condition not without danger to life, namely, the deprivation of the tissues of the water necessary to their chemico-vital processes, is ameliorated. But the patient is, notwithstanding, being starved, and will continue to lose weight unless we can contrive to do something more.

We want a remedy which will restrain the functional activity of the liver cells, or the blood ferment.

Unfortunately, we have no drugs that are known to possess this action with certainty.

Mr. W. B. Ransom has recently published some researches to show that **Glycerine** has this effect. He experimented on rabbits made glycosuric by puncture of the fourth ventricle, but the quantity of **Glycerine** used was very large, 20 to 30 cc, so that the equivalent dose for a man would be at least half-a-pint, a quantity which would present some difficulties in administration; but the subject is worth clinical attention, and the method employed might be advantageously extended to the investigation of the actions of other drugs. (Ransom, "Journ. of Physiology," Vol viii. No. 2).

Experience has placed **Opium** and its alkaloids, **Morphine** and **Codeine**, in the first rank among reputed remedies in diabetes. The last is the least satisfactory, and the most expensive.

Dr. Mitchell Bruce has shown that **Morphine** given by the mouth acts better than when injected under the skin, and he infers that this depends upon its greater influence upon the liver, when reaching this organ directly from the alimentary canal. (Mitchell Bruce, "Practitioner," January, 1887).

The dose of **Opium** should be 1 or 2 grains of the extract given once, twice, or thrice daily. Dr. Bruce cautiously pushed the dose of **Morphine** until one of his patients took 7 *grains* daily; but while everyone knows that the human subject can easily be made to tolerate enormous doses of **Opium** or its alkaloids when administered in

gradually increasing doses, it is doubtful whether these larger doses are attended by any corresponding therapeutic advantage.

Codeine is recommended in doses of ⅙ gr. in pill three or four times a day, but much larger doses have been given.

Next to **Opium** alkalies are our most serviceable drugs. The alkaline mineral waters of the Continent, especially those of Vichy and Carlsbad, have long enjoyed a great repute for the treatment of diabetes. These are far better drunk at home than sought at the end of a long and fatiguing journey, *for nothing is more hurtful to a diabetic than fatigue and mental excitement.* A bottle of **Vichy Water,** or some equivalent, is an indispensable adjunct of the treatment. **Bitartrate of Potash** Imperial (℥ss. to the pint) sweetened with **Saccharin** is a useful substitute.

The following drugs have all been recommended at various times as specifics, and credited with cures :—

Arsenite of Bromine, the solid drug (dose $\frac{1}{20}$ to ⅙ gr.), or in the form of **Clemens's Liquor** (dose 2 to 10 minims).

Salicylate of Sodium (dose 10 to 20 grains).

Bromide of Potassium (dose 10 to 30 grains).

Citrate of Lithia (dose 2 to 5 grains).

Salicin (dose 10 to 20 grains).

Boracic Acid (dose 10 to 20 grains).

Uranium Nitrate (dose 1 to 2 grains).

Jambul, the powder of the seeds of Eugenia Jambolana. This drug is said by Dr. Kingsbury to have cured a case of diabetes without dietetic restrictions, but has failed in five cases treated by the present writer (dose 3 to 5 grains every four hours). (Kingsbury, "Brit. Med. Journal," March 19th, 1887 ; Saundby, "Lancet," October 22nd, 1887).

Lactic Acid (dose 5 to 20 minims or more, well diluted. The **Acidum Lacticum Dilutum** contains about 18 per cent. of pure acid, the dose is from ½ to 2 drachms or more). Recommended by Cantani as supplying the normal product of sugar in the economy. It has been stated that acute rheumatism may be caused by its administration, and in one well known case, this was said to follow the use of 15 minim doses three times a day. The present writer for long used dilute **Lactic Acid** as a routine remedy in doses of ½ an oz. (equivalent to 43 minims of the pure acid) three times a day. In one instance only rheumatic pains and sweating occurred, but there was no rise of temperature or swelling of the joints, while out of scores of cases this is the only one in which anything of the kind was observed.

Oxygen.—Dr. Le Blond recommends the use of **Oxygen** in the

form of ærated waters, this gas replacing the carbonic acid commonly employed. He records the total disappearance of the sugar in three out of four cases. ("Lancet," April 30th, 1887).

Martineau's specific.—**Carbonate of Lithium,** 20 centigrammes, added to a tablespoonful of the following solution: **Arseniate of Sodium,** 20 centigrammes; **distilled Water,** 500 centigrammes; the mixture to be placed in an ordinary soda water machine (Briet apparatus), and this quantity to be used daily with and between meals, as a drink alone, or mixed with wine.

The present writer has had no experience of the two last mentioned remedies, but he has not observed any striking results with any of the others, though **Bromide of Potassium** should be regarded as a very useful nerve sedative in this as in many other diseases.

Among the accessory remedies, the vapour or Russian bath deserves to be more extensively employed. It relieves the harsh and dry state of the skin, and at least promotes the patient's comfort if it does nothing more. The hot air bath is less suitable, as it is not desirable to promote any further loss of water.

Cod Liver Oil in teaspoonful doses should be given in all cases where there is emaciation.

The intestines of diabetics are generally found *post mortem* to be stuffed with dry hard fæces, and it is very probable that this fæcal retention favours the production and absorption of poisonous substances which may prove fatal; it is, therefore, of importance to clear out the bowels at regular intervals by the use of a purge of **Jalap** or **Scammony.**

Occasionally chronic diarrhœa is present, and may require to be kept in check by the use of astringent remedies.

Complications. *Skin:*—The skin is often dry and rough; an eruption like psoriasis sometimes appears on the chest; or there may be an universal papular eruption (lichen), which itches a good deal. These conditions are all best relieved by the vapour bath. Boils and carbuncles also occur, and may be very troublesome. Painting with **Iodine** in the early stage is the best remedy. The worst form of skin eruption is the eczema or pruritus, which commences at the genitals, especially in women, and may extend over a large part of the body and thighs. Mr. Lawson Tait strongly recommends for this the **Unguentum Potassæ Sulphuratæ** in conjunction with **Opium** internally. **Borax** or **Boracic Acid** lotion, saturated, is a useful remedy.

Teeth.—Diabetics are liable to a form of inflammation of the gums, which leads to the destruction of teeth. This is apparently caused

by the acid reaction of the mouth, and is best prevented by the use of an alkaline mouth wash. When the gums are sore, **Chlorate of Potash** and **Borax**, 10 grains of each to an ounce of **Rose Water**, should be employed. Toothache is often a serious complication, as it causes loss of sleep, inability to eat, and consequent prostration, while fatal coma has followed the disturbance occasioned by an alveolar abscess.

Dry Mouth may be relieved by painting it with a solution of **Pilocarpine.**

Neuralgia, above all *sciatica*, is common, so such so that the urine should be examined for sugar in all persistent cases. It is usually amenable to the general treatment of diabetes, in which **Opium** no doubt plays an important part. **Salicylate of Soda** may be tried, if it persists.

Rheumatism: Pains of a rheumatic character are often met with, and may be treated by **Salicylate of Soda.** It is not true, as has been stated, that cases of diabetes with rheumatic phenomena are curable by **Salicylate of Soda.** The influence of **Lactic Acid** has been already alluded to as a supposed cause of such pains.

Phthisis is a frequent and naturally most unfavourable complication. It not uncommonly terminates by gangrene of the lung, a fresh patch of pneumonic consolidation becoming sphacelated. The treatment of phthisis under these circumstances can only be palliative, and calls for no special remark.

Gangrene of the lower extremities may occur, and further illustrates the proneness of the tissues of diabetics to decay.

Defects of Vision.—These may be due to three causes: (1,) cataract; (2,) a retinitis, very like one of the forms met with in chronic Bright's disease, where there are numerous small bright specks in the retina chiefly in the neighbourhood of the yellow spot; and (3,) an amblyopia without definite change in the fundus, closely resembling that due to tobacco, and probably in part dependent upon this, as it has not been observed by the writer in non-smokers.

Albuminuria.—Frerichs found only 16 cases of nephritis out of 316 cases of diabetes; but albuminuria is not uncommon, especially in elderly diabetics, where it may be taken to indicate the co-existence of some degree of chronic nephritis. It is probably not true that glycosuria *per se* causes nephritis, or it would be more commonly met with in the younger and more severe cases, while in these elderly persons there are always other co-operating factors present to produce this result.

Termination.—Diabetics not uncommonly die suddenly. When

death occurs immediately or after a brief interval, and with the phenomena of syncope, it is usually brought about by exertion, such as hurrying to catch a train. Tricycle riding has been responsible for several deaths in the last few years, and although this mode of exercise is very suitable to diabetics, the utmost caution against fatigue should be enjoined. Death from syncope in diabetes used to be attributed to fatty heart; but Frerichs has shown that the heart's muscle undergoes *glycogenic degeneration.*

Even when exertion is not followed by syncope and immediate death, it may cause more or less rapid death by coma.

Among the causes of coma must be placed excitement or mental emotion, too sudden changes of diet, constipation, acute diseases such as tonsillitis or bronchitis, catching cold, loss of sleep from toothache, in fact, anything which may upset the very unstable equilibrium of a diabetic.

Usually the first symptom complained of is pain at the pit of the stomach, this is followed by rapid pulse—120 or more—and often by peculiar deep sighing respiration, not attended by any obstruction to the entrance of air into the lungs, or other indications of dyspnœa. This premonitory stage may last some hours, the patient gradually becoming drowsy, until the condition becomes one of light coma, from which he can be roused with difficulty; vomiting sometimes occurs. The coma gradually deepens till death takes place. The temperature is generally low, but before death may rise to 103° or more. Convulsions have been observed in one or two cases at the last stage, but have never been observed earlier, thus affording a marked distinction from uræmic coma.

The breath has a peculiar odour in some cases, having been described as sour, like vinegar or sour beer; or sweet, like hay, apples, or chloroform.

Railton and Southam have described a case in which an hour before death the entire body became of a bright red colour like a boiled lobster, and just before death the hands and feet became perfectly black for the space of five minutes. ("Med. Chronicle," April, 1887).

These cases last from six or eight, to thirty-six or forty-eight hours. They are almost invariably fatal, though one case at the Manchester Infirmary recovered from one attack to die a day or two later, and Quincke is stated to have had a recovery.

The treatment recommended has included free purgation in the early stages, copious alkaline enemata, intra-venous injection of a neutral Soda solution into the veins, the hypodermic injection of

Strychnine in frequently repeated doses, the injection of **Ether**, etc.

The present writer has had many opportunities for treating these cases, and has tried all these plans, but, unfortunately, every case has terminated fatally. Intra-venous injection was tried many times. The solution used was either **Phosphate of Soda** or **Sulphate of Soda**, of specific gravity 1020, injected at the temperature of 100° Fahr., the quantity varying from 8 ozs. to as much as 36 ozs., and having been carefully regulated by the state of the pulse and the condition of the patient.

Alkaline enemata, or as in one case **Distilled Water** acidulated with **Acetic Acid**, are simple means, but have proved inefficacious.

The hypodermic use of **Strychnia** was suggested to the present writer by its power of combating the comatose stage of opium poisoning. It has been tried in only one case, and might have been pushed more boldly; temporary improvement followed, but the patient relapsed and died the next day.

The cause of the coma is an unsettled problem. Authorities are tolerably agreed in regarding it as toxic, but the actual poison is not known. This is not very surprising when we reflect that in the much older and better known "uræmic" poisoning, we are still disputing as to the precise substance to which the symptoms should be ascribed. It is very probable that the poison of diabetic coma is an acid, as the symptoms agree very well with those produced by artificially reducing the alkalinity of the blood of animals (Walter), while the presence of various acids in the blood of diabetics has been demonstrated by several observers, especially by Minkowski, who attributes the symptoms to intoxication by **β-oxybutyric Acid**. The doctrine of Acetonæmia has not been able to stand criticism, its supporters having failed to show that it is capable of producing similar symptoms, and what is of some importance, its presence in the blood during life or after death in any quantity cannot be demonstrated.

DIABETIC FOOD.—Unfortunately, many of the high-priced articles sold for the use of diabetics are very badly made. Some so-called **Gluten Bread** contains 69 per cent. of starch, whereas ordinary bread contains only about 90 per cent. Good **Gluten Bread** ought not to contain more than 30 per cent. French **Gluten Bread** of equal quality to English is sold in this country at a cheaper rate.

There is no suitable substitute for **Gluten Bread.** Almond cakes can be used as a dessert biscuit, but are not usually relished with food.

Bran biscuits are very unpalatable, especially to the dry mouth of a diabetic.

Gluten Flour, if of good quality, is a great addition to the diet, as with it various puddings may be made.

Skim Milk has had its enthusiastic advocates, but has failed to give general satisfaction. The six pints which its originator stated to be a sufficient diet, is a very scanty allowance for persons suffering from a wasting disease. It should only be tried in mild elderly cases where there is a gouty history, but is not recommended. Both Sir W. Roberts and the writer have had deaths during its employment.

Jellies and **Blancmange** may be made with calf's feet, gelatine, or isinglass, and sweetened with **Saccharin.**

Saccharin.—This substance, recently discovered by Dr. Fahlberg, is an invaluable substitute for sugar in the management of diabetes. It is said to have the following chemical composition :

$$C_6H_4 \begin{matrix} CO \\ SO_2 \end{matrix} > NH$$

Benzoyl Sulphonic amide.

Its sweetening power is said to be 300 times greater than sugar. Half a grain is sufficient to sweeten a cup of tea. It is not soluble in cold water, except in the presence of alkalies. A solution of 10 grains of **Bicarbonate of Soda** in an ounce of water will take up 20 grains of **Saccharin,** and 20 to 30 drops of this solution sweeten a cup of tea. A solution half this strength, of which a teaspoonful can be used, will probably be found more convenient.

Tabloids containing ½ a grain of **Saccharin** with a small quantity of **Bicarbonate of Soda**, are now to be obtained from all chemists. Some of the **Saccharin** preparations which have been sent round to the profession are objectionable, for example, there is an alcoholic elixir, the dose of which is equivalent to a teaspoonful of brandy ; and some of the lozenges or tablets contain both sugar and starch in notable quantity, so that it is advisable to examine all preparations before sanctioning their use.

DIETARY FOR DIABETICS.—Meat Soup, Beef Tea, Fish of all kinds, Butcher's Meat, Poultry, Game, Eggs, Green Vegetables, Gluten Bread, Milk, Cream,* Custard,* Jelly, Blancmange, Maccaroni, Vermicelli, Tea Coffee, Claret,* Burgunndy,* Brandy,* Whiskey.*

NOTE.—No Sugar must be used in the preparation of any of these articles. Those marked with a star (*) must be used in strict moderation. This strict allowance must be modified in many cases.

DIARRHŒA. *Alfred G. Bateman, M.B.*

Dr. Richardson, in the "Asclepiad," April 1887, p. 132, called attention to the peculiar character of the epidemic which prevailed in London and the provinces during the early part of the year. It was confined to no particular class, the wealthy being equally affected with the poor. The sudden nature of the attack, the absence of *pain, spasm, anorexia, high temperature*, and gastric disturbance, were marked peculiarities of the epidemic. A discharge of colourless fluid from the bowels, accompanied by distension of the abdomen and much flatus, were the symptoms chiefly noticed. Later on the fluid expelled became white and yeast-like, with occasionally some little solid or undigested substance in it. The symptoms were aggravated by food and drink. No cases were fatal, but relapse often occurred. The treatment adopted was warmth, avoidance of mental and physical fatigue, and a carefully regulated diet. The drugs resorted to were, at first, a **Mild Mercurial Pill**, and afterwards, twice daily, *ten minims* of **Dilute Nitric Acid**, five minims of **Tinct. Nuc. Vomic.**, with a *fluid drachm* of **Liquid Taraxacum**, in an ounce of water. It was supposed to be due to some atmospheric peculiarity, and, strange to say, children were not affected by it.

Cannabis Indica.—Recommended in summer diarrhœa by Drs. Bond and Edwards. It was originally advised by Dr. Turner, whose formula for its use is :—

℞ Tinct. Cannabis Indicæ ♏x	Tinct. Kino ℥j
Spt. Chloroformi ♏x	Aqua Menth. Pip. ℥j M. ft. Haust.

It is difficult, however, here to assign the exact value of the Indian hemp in this prescription, as it will be observed Tinct. Kino. is given in addition. Dr. Rennie, of Cawnpore, has given it with success in dysentery. It may also be given as :—

℞ Tinct. Cannabis Indicæ ♏x	Spt. Ammon. Arom. ♏xx
Liq. Morphiæ ♏v to ♏x	Spt. Chloroformi ♏xx

Aquam ad. ℥j M. ft. Haust.

Two tablespoonfuls every hour, or every second or third hour, according to the severity of the case. Here it appears to act by increasing the astringent and anodyne properties of the morphia salt (the dose given being too small to act by itself), and improving the appetite by its stimulant action on the nervous system. Depression and exhaustion were quickly recovered from, and in two or three days the cases were practically well. In tubercular diarrhœa this treatment was not successful, nor has it any apparent action on the excessive discharge in typhoid.

Antiseptic Treatment of Summer Diarrhœa : Cholera Infantum.—Nearly all the diarrhœas and intestinal catarrhs of young children are essentially dyspeptic in their origin. The usual factors in these cases are excessive heat, improper feeding, and bad hygienic surroundings, all of which prevent the food in the child's stomach from being digested ; fermentation takes place, and an excessive discharge from the bowels is the result.

Dr. Hope, of Liverpool, states in his statistics of 591 fatal cases of summer diarrhœa in children under two years of age, that only twenty-eight had the breast exclusively, showing that improper feeding is one of the chief causes of the mortality in these cases. Heat impairs the power of digestion by depression of nervous energy. It causes increased thirst by loss of water by free perspiration, which loss induces a child to take more food into its stomach than it can digest. It increases the tainted condition of the air by aiding decomposition in our streets, and still more by causing the food itself to become decomposed. Tainted milk will affect healthy children in a few hours. Dr. Brunton states that most of the alkaloids which have been obtained from the decomposition of albumen tend to produce diarrhœa. Enough alkaloids are produced in the intestines of a healthy man in 24 hours to kill him, if they were all absorbed and all excretion stopped, and the amount of ptomaines produced in disease is greater than in health. In addition to the food poisons which are produced by decomposition, catarrhal changes are induced by the presence of undigested food in the stomach and intestines. These set up vomiting and diarrhœa, the vomiting usually ceasing after the first day or two. The inflammatory changes are mainly found in the colon ; rarely are any changes found in the small intestine beyond a swelling and redness of Peyer's patches, with slight congestion of the lower part of the ileum. The seat of the most marked lesions are in the cæcum and sigmoid flexure—points where the irritant materials are kept longest in touch with the intestine.

The indications of treatment are—

1. To clear out the bowels.
2. To stop decomposition.
3. To restore healthy action to the intestine.
4. To heal the consecutive lesions.

To clear out the offending irritant substances there is nothing better than **Castor Oil**, provided the stomach is not very irritable. A copious injection of warm water may be given if there be much vomiting, but it must be sufficiently copious to reach the ilio-cæcal

valve. By experiment, Dr. Holt has found that to ensure this in a child of six months about a pint is necessary, and in one two years of age two pints, given slowly.

To stop decomposition an antiseptic must be given in small doses, and frequently repeated. It must not be nauseous, and must aid in restoring tone to the alimentary tract. Of antiseptics **Salicylate of Sodium** is the best, by Dr. Holt's report, and is prescribed in doses of 1 to 3 grains every two hours, according to the age, from three months to three years. In these doses the aqueous solution is tasteless, and can be readily given in food or drink. It has also the effect of controlling constant and persistent vomiting.

Naphthalin, although having strong odour, is not unpleasant to the taste. As it is very insoluble it is best given to children rubbed up with some milk powder, like sugar of milk. Doses, 1 to 5 grains in young children, according to age.

Resorcin is bitter, and not so readily taken, but is given in smaller doses, ½ to 2 grains. The **Bichloride** may be used in doses of $\frac{1}{120}$ to $\frac{1}{100}$ gr., but is apt to produce vomiting.

If there be much vomiting no food whatever should be given for from 12 to 24 hours. If thirst be the symptom, give then barley water cold, in teaspoonful doses. Withhold milk entirely unless peptonized, and in some cases even this causes an aggravation of symptoms. As food in place of milk, give wine whey, chicken and mutton broth, Mellin's food with barley gruel, Roy's tonic food (made without milk), expressed juice from raw beefsteak or roast beef, and in some cases raw scraped beef. The formula of raw beef juice, as suggested by Dr. Routh, may be used with good effect:—Take of the best gravy beef or rump steak a quarter of a pound; cut it into very small pieces, so as to make as fine as possible a mince of it. Place this mince in a tumbler, add as much *cold boiled water* as will cover the meat. Stir up frequently from time to time; after three or four hours the water will have the colour of blood, and the meat have become almost white, like fish: then strain through a hair sieve or a piece of muslin. Use a dessertspoonful or more every three hours for an infant over eight months old.

With regard to the fourth indication, viz., the treatment of consecutive lesions, there is some difficulty met with. Ulceration is not to be healed by the use of astringents by the mouth. It is useless to expect a minute dose, given by the mouth, of **Nitrate of Silver** or **Acetate of Lead** to heal a lesion situated low down in the intestinal canal. **Bismuth** in large doses promises fairly, but

practically it fails in a large number of cases. Dr. Holt sums up his treatment by stating that nothing but continued careful dieting is of any avail, as deviation from dietetic rules has been the frequent cause of relapses. He also recommends the continued use of the antiseptic treatment, with daily washing out of the large intestine with either pure water at a temperature of about 65° F., or with a weak solution of some antiseptic or astringent, such as **Benzoate** and **Salicylate of Sodium**, or **Nitrate of Silver** and **Tannic Acid.**

Liq. Benger Pancreaticus is recommended by Dr. Earle Jenner in cases of summer diarrhœa of children. Dr. Illingworth gives the following formula as an antiseptic method of treatment :—

℞ Spt. Arom. Ammon	℥j	Tinct. Belladonnæ	♏xv—℥ss
Sol. Acid Carbol. (1 in 20)	℥iss—℥iij	Syrupi	℥ss
Chloral Hydrat.	gr. xv—xx	Aquam ad	℥ij

M. ft. Mist. One teaspoonful every two hours.

To allay the feverish condition Dr. Haven advises the use of cold water applied by stripping the infant, laying it upon the blanket, and covering with a sheet wrung out first in water of, say, 95° F., and changing the sheet every five minutes, with one in which the water is gradually reduced down to about 60° F.

Opium in early stages, or at the approach of collapse, is indicated in some cases, and the **Bromides** may be substituted, but their action is slower and more depressing.

Salicylate of Iron, when the stools are sour, but not necessarily fetid :—

℞ Sulphate of Iron	gr. xx	Glycerine	℥iij
Sodæ Salicyl.	gr. xx	Aquam Ad	℥ij

One teaspoonful every hour until the stools are blackened, then every three or four hours.

Ice Water Injections in collapse, are useful, in quantities of two or three ounces at a time, causing immediate sleep and improvement in many cases. A small dose of brandy may be required in some cases before the injection is used.

To prevent milk fermenting in summer, and thus producing cholera infantum, Dr. Vaughan recommends the following rules to be carried out by the dairy-keeper :—Cows must not be fed upon the refuse of breweries or other fermented food. The udders should be washed before milking. The milk must be at once thoroughly cooled by placing the can in a tank of cold water, the can being uncovered during the cooling, and the milk gently stirred. The temperature should be reduced to 60° F. within the hour, and no buyer should receive milk which has a higher temperature than 65° F.

In *tropical diarrhœa* Dr. Younge advises the use of antiseptic treatment in the second stage, and has found **Pepsine** most successful, adding 5 grs. of pepsine to each half-pint of milk given during the 24 hours at a temperature of 100° F. In the early stage he advises the use of **Chloride of Ammonium** in 20 gr. doses four times a day, with a pill of **Ipecacuanha Powder** 1 grain, **Pil. Rhei Co.** 3 grains, and **Ext. Taraxacum** q. s. at night. He considers that "Hill diarrhœa" is due to the absence of the antiseptic and digestive action of the bile.

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DIGESTION.

Alfred G. Bateman, M.B.

See also "Dyspepsia."

What is the Influence of Alcohol on the Digestion?—According to Gluzinski it varies at different times, according as the alcohol still remains in the stomach, or has been absorbed into the circulation. In the former case *albumins* are delayed in their digestion. After absorption it stimulates secretion, causing a *marked increase* in the acid constituents of the gastric juice, and thus accelerates digestion. Secretion also continues much longer with alcohol than without it. The beneficial action of small doses of alcohol is thus explained, and the ill effect of large quantities also. With large quantities of alcohol, the presence of the spirit in the stomach owing to its non-absorption, not only retards digestion, but the increased secretion, and its hyperacidity may be extremely harmful in certain conditions of the stomach. In medicine, therefore, alcohol should never be prescribed in large doses, but only in small quantities, and most beneficially *just before meals*, as the increased secretion which it then sets up is of use as soon as the food enters the stomach.

Rumination in Man. — Two cases have been reported by Johanessen. In one the regurgitations became very frequent, and after a few years occurred after every meal. Remastication occurred with the same satisfactory result as at first. Vomiting only came on twice in his life, and then only after too much alcohol. In another

case, reported by "Le Juge de Sedrais," the patient, a child of eleven, had contracted the habit of causing food to return into the mouth, in order to repeat the taste of any aliments he preferred. To do this he first recalled the taste of whatever food he liked, and by contraction of the abdominal muscles caused it to return into his mouth. It was supposed that this habit was acquired from the fact that he had been brought up in the country, and milk had formed the principal article of diet. The stomach had probably been overloaded, and regurgitations, giving rise to pleasurable sensations, had occurred. **Hydrotherapy** was suggested as a remedy, with washing out of the stomach, and the application of the actual cautery to the epigastric region as further treatment.

Relative Digestibility of Chief Albumenoids: Proximate Principles.—In experiments conducted by Dr. James Fraser, the following results are tabulated by Dr. Neale:—The most digestible albumenoid was found to be cooked myosin; then came raw serum albumen; then in order came syntonin, alkali albumen, raw egg albumen, casein, cooked egg albumen, cooked serum albumen, raw myosin, and gluten. These results were obtained after the albumenoids had gone through the processes of peptic and pancreatic digestion, as well as dialysis. In tryptic digestion cooked myosin heads the list, and then in order raw serum albumen, raw egg albumen, syntonin, cooked serum albumen, raw myosin, casein, gluten, and cooked egg albumen last. Many of these albumenoids are not ordinarily used as foods, but the practical results of these experiments show that beef tea, as ordinarily prepared, is of small nutritive value, but if the white of egg be mixed with a small cup-full, and the whole heated to 160° F., the value is greatly enhanced. Again, if raw minced beef be just covered with a solution of hydrochloric acid, made by adding four drops of the acid to one pint of water, and left to macerate for the night, the liquid strained off and squeezed out of the flesh by wringing in a cloth, contains so much syntonin as to make it highly nutritious when neutralized. Bread and milk is a bad food for delicate stomachs; whey is mildly nutritive and easily digested. Dr. Neale considers that where nutritive enemata are desired, those substances found soluble in alkaline fluids, and therefore, easily acted upon by the pancreatic juice, namely, raw albumen, syntonin, or alkali albumen, may be used alone or dissolved in some meat tea.

The experiments of Kuhne and Chittenden on albumose, globulose, and peptones, have led to the discovery of new proteid bodies, and to a more correct differentiation of some which were previously known.

The first stage of peptic digestion is commonly supposed to be the formation of syntonin or parapeptone; the next propeptone, and finally peptone. Other changes have now been discovered. The products are found to vary with the digestion of different proteids, and the products also differ in the various stages of the several bodies. Propeptone is now found to be composed of various bodies, and peptone of two—one hemipeptone and the other antipeptone. The hemipeptone is split up with leucine and tyrosine by trypsin; antipeptone is not so changed. The bodies of which propeptone is composed belong, some to the hemi-group, others to the anti-group, and those derived from egg albumen, fibrin, etc., are called *Albumoses;* the others, derived from globulin, *Globuloses. Albumoses* are again split up into four, after neutralization has precipitated the parapeptone, which, removed by filtration, leaves a clear solution. The addition of sodium chloride gives dense precipitate, consisting of proto. dys. and hetero albumose, and remains undissolved one, deutero albumose, which is only thrown down by addition of 30 per cent acetic or phosphoric acid.

These albumoses are considered to be a row of bodies intermediate between albumens and peptones. Deutero-albumose is the nearest in the series to peptones, as it is only slightly precipitated by chloride of soda, and remains unprecipitated by nitric acid.

Globuloses.—These are separated in the same way as albumoses. Proto-globulose in salt solution becomes cloudy on heating, and clears on cooling—a direct contrast to proto-albumose. Deutero-globulose is not precipitated by sodium chloride and acid, as is deutero-albumose; hetero-globulose has, however, the same properties as hetero-albumose. The globuloses are richer in carbon and in sulphur, and poorer in nitrogen than the albumoses. In the urine of patients suffering from osteo-malacia, the hemi-albumose found in it resembles hetero-globulose in its composition.

To render peptones free from albumoses it is only necessary to add saturated solution of **Ammonium Sulphate**, which precipitates all proteids except peptones. Peptones are precipitated by **Tannin**, by **Iodo-Mercuric Iodide**, **Phospho-Molybdic Acid**, **Phospho-Tungstic Acid**, and **Picric Acid.**

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DISINFECTANTS IN GYNÆCOLOGY. *John W. Taylor, F.R.C.S.*

Since 1885 **Corrosive Sublimate** solution (1 in 2,000 to 1 in 4,000) has been used in the Prague Obstetric Klinik, *except in renal and anæmic cases.* One case reported to have died from sublimate poisoning after the use of this (1 in 2,000) injection; 1,620 cases having been treated similarly with no bad results. (Centr. fur Gyn., No. 47, 1886.)

Iodoform plugs, **Salolized** cotton wool, and **Salol** bougies and suppositories, are advised by Prof. Valliet as disinfectants. The odour of Iodoform may be disguised by a final plug treated with turpentine and olive oil. ("Der. Fortschritt," 13th July, 1887.)

Small **Iodoform** bougies ("Ehrendorfer's pencils,") are specially recommended for insertion in the uterus, after clearing out or curetting. (Dr. Leslie Phillips, on "Abortion.")

Dr. Playfair has formulated some "antiseptic rules for monthly nurses," which may be generally useful, and are here subjoined—

1. Two bottles are supplied to each patient; one contains a solution of **Perchloride of Mercury,** of the strength of one part to one thousand of water, tinted with litmus (called the 1 in 1,000 solution), the other carbolised oil (1 in 8).

2. A small basin containing the 1 in 1,000 solution must always stand by the bedside of the patient, and the nurse must thoroughly rinse her hands in it every time she touches the patient in the neighbourhood of the genital organs, for washing or any other purpose whatsoever, before or during labour, or for a week after delivery.

3. All sponges, vaginal and rectal pipes, catheters, etc., must be dipped in the 1 in 1,000 solution before being used. The surfaces of slippers, bed-pans, etc., should also be sponged with it.

4. Vaginal pipes, enema tubes, catheters, etc., should be smeared with the carbolised oil before use.

5. Unless express directions are given to the contrary, the vagina should be syringed twice daily after delivery with warm water, with a sufficient quantity of Condy's fluid dropped into it to give it a pale pink colour.

6. All soiled linen, diapers, etc., should be immediately removed from the bedroom.

N.B.—These rules are for the purpose of protecting the patient from the risk arising from accidental contamination of the hands, sponges,

etc. It is, therefore, hoped that they will be faithfully and minutely adhered to. ("British Med. Journal," Nov. 12, 1887.)

Several cases have been recently reported in which mercurial poisoning and death have apparently resulted from the intra-vaginal or intra-abdominal use of sublimate solutions. The solution of **Perchloride of Mercury,** being the strongest antiseptic poison we possess, should be therefore retained in use mainly for the hands of the operator, assistants, and nurses. If ever used for vaginal injection the solution should not be stronger than 1 in 5,000. Concentrated solutions of **Perchloride of Mercury** (for the surgeon's use in making weaker dilutions), are made by the help of (*a*) glycerine or (*b*) spirit.

DISLOCATIONS. *J. Hutchinson, Jun., F.R.C.S.*

Humerus.—A fair number of cases of reduction of sub-coracoid dislocation, by "right-angled traction" from the trunk, have been recorded in the past year, and special merit and novelty claimed for the method. Now that anæsthetics have removed the difficulties arising from muscular spasm, the great difficulty in reduction has disappeared, and the old-fashioned heel-in-axilla method, or Kocher's newer manipulation, will almost invariably prove successful. Considering that in old people the great risk of reduction lies in injury to the axillary vessels (of which upwards of thirty cases have been collected in the "Annals of Surgery,") it will probably be accepted as a safe rule not to employ any method involving much traction of the arm away from the trunk, or violent manipulation. The latter is especially prone to be followed by troublesome osteo-arthritis and consequent stiffening. It is, however, only to be expected that some loss of power and stiffness should follow a dislocation of the humerus, however gently and skilfully reduced, if one recalls the injuries to the muscles round the joint. Of these a good example is recorded by Mr. Hardyman in the "Lancet," Nov. 5, 1887. A man had sustained a sub-spinous dislocation as the result of a fall of about seventy feet. After manipulation had failed the heel-in-axilla method succeeded in effecting reduction, but the patient died from injury to the brain. The supra and infra spinatus muscles had been torn from their attachment, as well as the sub-scapularis, the biceps dislocated from its groove, and the long head of the triceps and the capsule of the joint extensively torn. The teres minor had formed the obstacle to reduction by manipulation.

In two cases of sub-coracoid dislocation, which I have dissected, the small elevator muscles were either torn or the greater tuberosity detached, and the biceps tendon had been displaced from its groove. Prof. Flower's researches confirmed the same extensive laceration

and displacement of muscles, which may be assumed therefore to occur in most cases except those in which dislocation happens repeatedly in the same patient from slight causes.

The method of reduction previously mentioned is described by Dr. Macleod in the "B. M. Journal," 1887, vol. 1, p. 50. The patient lies on the floor on his back, the surgeon sits down, and placing his heel in the axilla supinates the forearm, and makes traction directly outwards from the patient's trunk. It is stated that an anæsthetic is as a rule needless.

Lateral Dislocation of the Leg.—An example of this rare accident is reported in the "Lancet" of Nov. 5, 1887; it was caused by a fall from a height of 150 feet. The external condyle of the right femur rested on the inner facet of the tibia, after reduction great effusion followed, but by careful treatment with ice and weight extension a very useful limb was obtained.

Dislocation forwards of the sternal end of the clavicle.—It is well known that it is very difficult to retain the bone in position after this injury, at the same time the only drawback that usually results is the deformity. M. Le Fort recommends applying a sort of breast-plate of gutta-percha, carefully moulded to the front of the chest and lower part of the neck, and fixing it in position by a starched bandage: it is removed at the end of five weeks.

Old Dislocations of the Elbow.—Neglected cases of dislocation of the forearm, usually the backward variety, may be sometimes improved by operation, though the difficulties of this proceeding are by no means small. If the elbow is at right angles and fairly useful it is of course best not to interfere, but in other cases considerable improvement has resulted from operative measures (tenotomy of fibrous bands, fracturing the oleranon, excising the overgrown head of the radius, or even excision of the joint), at the hands of various surgeons. Stimson discusses the subject in the "Medical News" of April 2, 1887, and several cases have been recorded in this year's "Centralblatt für Chirurgie."

Displacement of the Inter-articular Fibro-Cartilage of the Lower Jaw.—This lesion, which generally occurs in women, produces a partial dislocation of the jaw, with considerable trouble in its movements. Prof. Annandale ("Lancet," 1887, vol. 1, p. 411), has twice successfully cut down upon the joint, and fixed the cartilage by catgut sutures to the tissues on the outer side of the joint. Both patients were much relieved.

In dealing with a displaced semi-lunar cartilage in the knee-joint, the

same author advises a horizontal incision, which opens the joint, the cartilage is then secured to the periosteum and fascia about the upper end of the tibia by means of catgut sutures. It must be admitted that the symptoms of displacement of the cartilage are not always sufficiently clear to warrant such an operation, and Prof. Annandale cites some cases in point. In two he opened the knee and removed a fatty out-growth from the synovial membrane, and in another a small sarcoma, having the same origin. In a fourth case a bony out-growth from the lower end of the femur was removed ; all the four cases presented much the same symptoms as those accompanying a displaced semi-lunar cartilage. A good result followed in each, but the necessity of employing the strictest antiseptics in such operations, and the risk of suppuration in the joint, should always be borne in mind.

Dislocations of the Hip.—The immense gain effected by the substitution of manipulation after Bigelow's method, for the old plan of extension is universally admitted, and has been lately emphasized in a lecture by Professor Humphry ("Lancet," Nov. 27, 1886), which also contains some very interesting accounts of dissections of recent dislocations. Prof. Humphry combats the view held by Morris and others that the femur is first displaced downwards during abduction, and then driven on to the dorsum ilii. He holds that the rent in the capsule is usually behind the pubo-femoral ligament or lowest part of the joint, that the femur is usually adducted, flexed, and inverted at the time of the accident, and that it commonly tends to be driven backwards between the two obturator tendons. Considerable tearing of these muscles, as well as of the more delicate ones at the back of the hip (gemelli, quadratus, and pyriformis), probably occurs in most cases.

Mr. Morris's reply to Prof. Humphry's views will be found in the "Lancet," 1886 vol. 2, p. 1165.

As is well known, dislocation of the hip is very rare in childhood, Mr. Newbolt records an example of dorsal displacement in a child aged five, due to fall off a waggon. Reduction was easily accomplished by manipulation, and the child could walk in three weeks.

Dislocation of the Carpus.—Several instances of this rare accident have been recorded during the past year, most of them being in young subjects. One of them was reported by Dr. Walker, ("Lancet" of September 10). The dislocation is almost invariably on to the back of the forearm, and is easily reduced. Dr. Bedford reports a case in a boy of fourteen, in which it appeared that the radial part of the carpus was alone displaced backwards, with at the same time a fracture of both bones of the forearm. A good result followed the reduction and

use of splints. It must be owned that from anatomical considerations it is difficult to credit the account of this case.

Downward Displacement of the Scapula.—A good example of this not uncommon dislocation is recorded by Mr. Hume ("British Medical Journal," Oct. 8). The diagnosis is usually very easy owing to the projection of the outer end of the clavicle, but unless carefully treated the deformity will probably persist. A broad strip of plaster over the clavicle and under the elbow added to the usual bandage, etc., for fractures of the collar-bone, is perhaps the most effective method, but this should be worn for nearly a month, and if possible the patient should be kept in bed during the first fortnight.

DYSENTERY.

Alfred G. Bateman, M.B.

Naphthalin was administered in about 140 cases by Dr. N. M. Dolgopoloff, of Kuisk. The drug was given in from 1 to 5 grs., five times a day, either alone or with **Emulsion of Castor Oil** and **Opium.** In two cases only did it cause vomiting.

Ipecacuanha.—In cases where this remedy is required, but is apt to cause sickness, Dr. Watson Smith recommends it being given in a spoon, held with a handkerchief strongly scented with perfumery, so as to cause the imagination to attribute the delicate flavour of the scent to the article administered, and thus act upon the stomach through the olfactory nerves.

Cannabis Indica.—Dr. Rennie, of Cawnpore, gives the following formula for its use :—

℞ Tinct. Cannabis	♏ xv	Mucil Gum Arab.	♏ xxx
Bismuth Subcarb.	grs. v		

Mix and add :—

℞ Tinct. Zingib	āā ♏ xx	Aquæ Cinnam.	ad. ℥j
Tinct. Card. Co.			
Spt. Chlorof.			

This quantity to be taken after each meal, and the dose kept up for some time after the symptoms have ceased. Dr. Stoner, of Holt Missouri, for this disease orders, first :—

℞ Sodæ Bitart.		Sodæ et Pot. Tart.	āā ℥ss

M.S. Dissolve in half a glass of water, and give every two hours, until the character of the stools is changed.

He also orders flannel cloths, to be wrung out of as warm water as the patient can bear, and applied to the abdomen every fifteen minutes. As soon as the character of the stools changes he gives :—

℞ Bismuth Subnit.		Pulv. Ipecac. Co.	āā gr. x

M.S. Take one every three or four hours, as may be required to control the action of the bowels, and keep the patient quiet.

Milk he considers the best food, but allows light diet in addition.

REFERENCES.—Dr. Dolgopoloff, "Proceedings of Medical Conference at Kuist Hospital," J., 1886. Mr. Watson Smith, "Med. Chronicle," March, 1887. Staff-Surgeon Rennie, "Indian Medical Gazette." Dr. Stoner, "Medical World."

DYSIDROSIS POMPHOLYX, or **CHEIRO-POMPHOLYX**,

N. Whitelaw Bourns, M.D.

Is a rare disease, almost entirely confined to the palms of the hands and the soles of the feet, occurring as vesicles and blebs, with maceration and exfoliation of the epidermus. Tilbury Fox, who first described the affection, thought it a more or less inflammatory condition of the sweat glands, while Hutchinson and Robinson look upon it as a neurosis, and in no way connected with the sudoriparous glands. Duhring says dysidrosis and cheiro pompholyx are quite distinct diseases.

Tilbury Fox recommended diuretics, as **Acetate of Potash**, with saline aperients, and locally **Belladonna** and sedative applications. One case recently under our observation, rapidly got well with a lotion of **Boracic Acid**, 10 grains to the ounce.

McCall Anderson says, 'Sometimes the best results are obtained from wearing a pair of gloves made of pure vulcanised indiarubber (Diseases of the Skin, p. 83).

DYSMENORRHŒA. *John W. Taylor, F.R.C.S.*

In the young is often dependent on *Anæmia*, and disappears with the cure of the latter (see "Anæmia.")

When sudden or occasional only, and accompanied by some pyrexia, **Tinct. Aconiti** (one minim every hour), **Liq. Ammonii Acetatis** (half ounce in 4 hours), **Tinct. Pulsatilla** (5 minims in 4 hours), *mustard baths* and the *hot pack* are the best remedies. Sometimes an anodyne is necessary. Then **Opium or Chloral**, or both combined, may be personally administered by the surgeon.

When the history of this symptom is of long duration the *time* of its appearance and the *seat* of the pain are aids to diagnosis of the cause.

When the pain occurs some time before the flow, and is mainly abdomino-lateral, the cause is probably ovarian (P.V. The ovary may often be felt: large, tender, and low).

When the pain immediately precedes the flow, and accompanies its onset, the cause may be tubal. In this case the tube may usually be felt distended, adherent to the uterus, and generally behind it.

When the pain occurs only *with* the flow, is spasmodic and felt in the back, as well as above the pubes, the cause is probably uterine.

In *Ovarian Dysmenorrhœa* when the flow is scanty, and functional development is delayed, **Iodide of Potassium,** in increasing doses, **Nux Vomica,** **Quinine** and **Iron,** are indicated. Intra-uterine faradization is also useful.

When the flow is sufficient or profuse, **Bromides** (in large doses), **Tinct. Cannab. Ind.,** 5 minims every hour for 7 or 8 doses, and *hot injections* are serviceable.

Salix Nigra (Fl. Ext. ʒss. T.D.) has lately been recommended for this condition. Dr. Hutchinson, ("B. M. J.," July 30, 1887.)

In *Tubal Dysmenorrhœa* absolute *rest* is essential, and the *operation for removal* may possibly be required.

In *Uterine Dysmenorrhœa* the following remedies are best: **Ext. Viburn. Prunif.** Liq. half drachm every quarter hour, Ext. **Ergot** Liq. 5 to 10 minims, **Tinct. Actææ Racemosæ,** 10 to 30 minims (when there is rheumatic history), **Potassi Iodidi,** 5 to 15 grs., and Liq. **Strychnæ.**

But something more than the administration of medicine is often needed.

In *Uterine Dysmenorrhœa,* whether any true stenosis of the internal os exist or not, some difficulty is frequently found in guiding the sound beyond the internal os, the uterus being small and anteflexed or "infantile." In these cases most benefit is to be obtained by operation. Two operations are in use.

1. Instrumental dilatation under Anæsthesia (Goodell's operation. See "Annual," 1887).

2. Division of the internal os with the Hysterotome (Simpson's operation).

The improvement gained by either operation is sometimes very marked and brilliant, but is apt to be temporary only unless followed up by the use of an intra-uterine rubber pessary, and the intra-uterine pessary in these cases is undoubtedly attended with some considerable danger.

The writer is inclined to think that Goodell's operation performed with gentleness and patience, and repeated a second or third time if necessary, is the safest proceeding.

DYSPEPSIA.

Under this name a wide variety of symptoms due to functional disturbance of the digestive organs are included.

The treatment depends upon a careful consideration of the external or internal causes.

We class as *external* causes, deficiency of exercise and fresh air,

improper foods, irregularity of meals, and deficient mastication. In chronic dyspepsia, the condition of the teeth, and the nature of the food, always demand close attention.

It is often less a question of the kind of the food than whether that food is taken in a form suitable for digestion. Meat may be at once the best and worst of foods according to the time it has been "hung," and the manner in which it has been cooked. Twice cooked meat must always be regarded as prejudicial.

The same applies to *starch* foods. It is not that potatoes always cause flatulence in persons of weak digestion, but potatoes, served in the most usual way, do so, because they leave an immense amount of work to be done in the stomach which ought to be done in the kitchen. All starch foods should be exposed to heat for a long time before they are used as articles of diet. Potatoes should be baked with their skins on, or if boiled should be mashed and baked after boiling. Dr. Milner Fothergill has done good service by strongly insisting on these points. (See also the article "Digestion.")

The *internal* causes of dyspepsia will depend upon (*a*) deficient nervous and muscular tonicity of the walls of the stomach; (*b*) the condition of its mucous membrane; (*c*) the functional activity of other organs, especially the liver and pancreas.

Deficiency of Muscular Tone causes sluggish digestion, accompanied by flatulent distension. This may be improved by *exercise*, *massage*, *tonic baths*, and the use of **Tinct. Nux. Vom.**, 2 to 5 minims before meals.

Catarrh of the Mucous Membrane is frequently dependent upon the sluggishness of the portal circulation, which may be excited or maintained by the use of indigestible food. Its treatment when due to these causes is *not* to excite excessive activity of the liver by the use of cholagogues. The result of such medication is to cause subsequent depression, leaving the patient frequently very much worse for the treatment employed. Neither is it good practice to use purgatives which have no direct action on the liver. In **Mercury** and **Podophyllin** we have two remedies which will act with certainty and precision when properly employed. **Mercury** is indicated when the tongue is hot, dry, and clammy in the morning on waking, sluggish digestion, frequently accompanied by acidity, the stools generally being light and of clayey consistence. An ordinary **Mercurial Pill** does no permanent good, but the following powder taken regularly until the stools resume their natural colour may be regarded as specific to this condition :—

℞ Hydrargyri grs. xij | Sacch. Lac. ad. ʒij

Mix. Ft. pulv. Sig. One grain to be given three times daily for three days, afterwards twice daily until the symptoms are removed.

Podophyllin is indicated when, in addition to the ordinary symptoms of sluggish digestion, we have a sallow complexion, pains about the shoulders, and *dark* stools, sometimes, but not always, constipated. This remedy is one which appears to act better in combination with **Belladonna**, and the following pill forms a convenient method for its employment.

℞ Res. Podophyll. gr. ½ | Ext. Belladonnæ gr. ⅛

Mix. Ft. Pil. gr. j. Sig. One pill to be taken morning and night for two days, afterwards one each night.

Although some of our readers will regard the doses of both remedies as very small, they will find that in some cases the first dose will cause violent purgation, the patient passing a large quantity of bile. This we take to be due to the fact that it liberates bile, the flow of which has been obstructed, the bile acting as a natural purgative.

When there is a catarrhal condition of the stomach and the bowels are loose, the tongue white and furred, and a general distaste for food, a condition not infrequently produced by the use of a rich and fatty diet, **Pulsatilla**, 2 to 5 minims is a most valuable remedy.

When there is an atonic condition *of the mucous membrane* causing deficient secretion of gastric juice, we have a number of symptoms depending on, not only sluggish digestion, but frequently also on the manufacture of vicious products as a result of the defective digestive process. This condition is generally associated with deficient muscular tone, which allows the gases caused by fermentation to collect in large quantities in the stomach. **Nux Vomica** is one of the most valuable remedies in this condition. **Pepsin** and **Pancreatine** may also be used with advantage to help the digestive process while the stomach is regaining its natural power, but not longer, and in severe cases the patient should be fed as far as possible on foods pre-digested by these ferments. The use of **Nitro-Hydrochloric Acid Dil.** (5 minims) before meals is also very helpful to aid digestion in these cases.

The remedies used to palliate the various symptoms of Dyspepsia, were fully considered in the "Dictionary of New Treatment," 1887, p. 108. See also "Dyspepsia of Children."

DYSPEPSIA—of Children. *Alfred G. Bateman, M.B.*

In cases where there is great vomiting of curds of milk Loney recommends the *washing out of the stomach* of infants to remove all irritant matter. It is accomplished by using a No. 11 or 12 English gum catheter and luke-warm water with a little salt in it.

Dr. McNaught considers that the majority of cases of gastric troubles in children are due entirely to improper feeding, but states that there is in some families an hereditary disposition to these disorders. In the "hereditary" cases the acid present is not excessive, nor is there fermentation to any injurious extent. The condition seems to be one of great irritability, with an impaired and enfeebled digestive power in the gastric juice secreted. The coagulation is produced by the rennet ferment, not by the acid present. Milk should be removed entirely from such cases, for at least some time. The rennet ferment is quite distinct from the acid and peptic ferments, it will act in a neutral solution, but is more powerful in one slightly acid. Milk, if rendered alkaline, can to a slight degree resist the power of the rennet alone. One third of **Lime water** must be added to the milk to effect this purpose. Condensed milk being mostly distinctly alkaline, and containing less casein, is more advantageous than cow's milk; the curds formed are finer, less dense, and much more easily soluble. Arrowroot, according to Dr. McNaught, only prevents coagulation when made thick enough, in the proportion of one teaspoonful to half a pint of water.

To prevent the occurrence of dyspepsia in infants, lactation should be pressed upon the mother, provided she be in good health. If the latter's milk be too poor, Burchin recommends that she be generously and carefully fed; and if, on the contrary, the milk be too rich, the intervals between the "feeding" should be lengthened. Where bottle feeding has to be resorted to, nothing but diluted and sweetened milk should be used for the first six months. Weaning of breast-fed children must be attended with caution, and not abruptly brought about. As an aperient teaspoonfuls of **Vichy water**, mixed with the breast milk is advised; colic treated by injections of **Sweet Oil**, and vomiting controlled by **Lime water**; for obstinate constipation a mixture of **Sweet** and **Castor Oil** in teaspoonful doses.

EAR (Diagnosis of—Diseases of) *J. Dundas Grant, M.D.*

The diagnosis of the diseases characterized by defect of hearing is dependent on a careful consideration of the subjective symptoms, accompanied by an examination of the physical conditions. The following table, prepared by the writer for the use of students attending the Central Throat and Ear Hospital, is only intended as an outline of the general indications conveyed by the subjective symptoms.

The patient complains of *deafness* (*i.e.* diminution of air-conduction.)

(*A*) *The onset is acute.*

(*a*) Without pain.

1. Bone conduction increased. — Eustachian catarrh.
2. Bone conduction hardly increased. — Cerumen impacted.
3. Bone conduction diminished. — Acute nerve deafness (often syphilitic).

(*b*) With pain.

(*α*) Bone conduction increased.

1. Slight constitutional disturbance. — Acute catarrh of tympanum.
2. Considerable constitutional disturbance and early purulent discharge. — Acute suppurative catarrh of tympanum.

(*β*) Bone-conduction diminished.

Sudden occurrence, with sickness, giddiness, tinnitus, and sometimes apoplectiform seizure. — Acute disease of labyrinth.

(*B*) *The onset has been gradual, and the ear disease of long-standing.*

(*a*) Never any discharge from the ear.

(α) Bone conduction increased.

1. With well-marked catarrh at onset. — Subacute catarrh of middle ear.
2. Onset insidious, with tinnitus at an early stage. — Chronic dry catarrh (sclerosis) of middle ear.

(*β*) Bone conduction diminished.

Chronic "nerve deafness" (a wide term to include labyrinth, auditory nerve, auditory nuclei and cortical centres.)

(*b*) Present or past discharge.

(aa) Present discharge.

1. Profuse, with perforation sound on auscultation. — Chronic suppuration of the middle ear, with perforation.
2. Scanty, without perforation sound. — Chronic suppurative catarrh of the external meatus, sometimes of the membrane only (myringitis).

(bb) Previous discharge, but none at present.

1. With dry perforation sound on auscultation. — Chronic suppurative catarrh, with permanent perforation.
2. Without perforation sound. — Suppurative catarrh, with cicatriced perforation.

For testing the capacity of hearing an ordinary watch should be used, and a tuning-fork as well. The most convenient is Gardiner Brown's model. This is pitched to the middle C and is best so tempered that, with a normal ear, it is heard for 30 seconds opposite to the meatus after its vibrations have ceased to be audible while placed on the mastoid (Rinne's Experiment).

Mode of using the tuning-fork.—To test "*air conduction.*" Set the fork vibrating and place it opposite the patient's meatus. As soon as he ceases to hear it place it opposite your own and count for how many seconds you hear it longer than he does. Mark down this number with a *minus* sign. To test "*bone conduction.*" Set the vibrating fork in contact with your own mastoid process. When you cease to hear it, apply it to the patient's and see how many seconds longer than you he hears it. Note the number down beneath the other with a *plus* sign. If he does not hear it longer than you, set it again vibrating, place it on his mastoid, and when he ceases to hear it place it on your own, counting how many (if any) seconds you hear it longer than he does. Write the number below with a *minus* sign.

In advanced years bone conduction is normally diminished.

As a rule in middle-ear disease the tuning fork is heard by bone conduction longer than in health and longer than by air conduction, whereas in nerve-deafness it is heard less long than in health and (when considerable and without middle-ear disease) less long than by air-conduction.

It is usual in cases of simple impacted cerumen to find that the bone-conduction is hardly, if at all, increased.

If the tuning fork is heard neither longer nor shorter than normal, the symbol (+0) may be used, and if it is not heard at all ($-\infty$) *i.e. minus infinity.*

This mode of notation was described by the writer at the meeting of the British Medical Association at Brighton, in August, 1886. A somewhat similar method is described in Dr. Urban Pritchard's work on "Diseases of the ear."

Auricle.—Defective development, malformations, supernumerary rudimentary auricles, fistulæ (from incomplete closure of bronchial cleft) *tumours* of various kinds, or other ordinary surgical affections are sufficiently obvious. One of the most peculiar and important diseases of the auricle is the *othæmatoma* or blood tumour arising idiopathically (with rare exceptions) in the insane only, and traumatically apart from insanity. The whole auricle rapidly swells up

into a rounded tumour of a somewhat purplish tinge. After a time it begins to diminish and shrivels up into the characteristically deformed shape of the "insane ear" found in all asylums.

External Meatus.—The external meatus may be *occluded*, owing to congenital *malformation* (usually accompanied by imperfect development of the middle ear), *cicatrical adhesions* on the advance of any of the conditions which lead to narrowing. *Narrowing of the meatus* may be congenital or it may be acquired. When acquired it is temporary or permanent. The most frequent form is temporary *inflammatory thickening* of the lining of the meatus. It is an inconvenient and often serious complication of middle ear suppuration impeding the exit of discharge and interfering with the surgeon's investigation and manipulation. In advanced age the meatus is often *collapsed*, through the condyle of the lower jaw being driven up, owing to the loss of the back teeth.

Diffuse External Otitis when general is usually characterised by a discharge less profuse than in tympanic disease, and by the absence of the perforation sound on auscultation; or of much disturbance of hearing. It may be confined to the membrane (myringitis) which is at first congested, and may later become the seat of granulations, and even of polypi.

Circumscribed External Otitis, or *Furuncle in the External meatus.*—The patient suffering from this affection complains of severe throbbing pain in the ear with proportionally insignificant diminution of hearing power. An inspection with reflected light should be made before inserting a speculum, as this instrument causes a degree of pain which is singularly distressing, though of diagnostic value. A somewhat conical sessile swelling is seen on the wall (generally the anterior wall or floor) of the meatus. According to its maturity it is more or less red on the summit, and may, previous to breaking, give a sensation of fluctuation, or elasticity, but oftener of pitting under the probe.

Kirchner ("Monatschrift für Ohrenheilkunde," January, 1887), describes the micrococcus by which it is supposed to be caused.

Cerumen does not materially interfere with hearing till it completely occludes the meatus. Commonly this occurs quite suddenly. Among other symptoms, it may give rise to "ear-cough." Mr. Percy Jakins records in the "Practitioner" a case in point of exceptional interest. The patient had for four years a gradually increasing cough accompanied by a high degree of deafness. For thirteen weeks previous to coming under Mr. Jakins' care "he wasted, had night sweats, had delirium at times and could get no rest at night. Amongst other

opinions of his case was one that he was suffering from consumption and could not live forty-eight hours." After removal of *cerumen from both ears* he slept for three hours, his lung-symptoms disappeared, and he rapidly regained perfect health.

Foreign bodies are best not believed in till seen. Probing must on no account be practiced, except under good illumination.

Middle Ear, Inflammation of.—The middle ear is composed of the tympanum, the Eustachian tube, and the mastoid cells. When the tympanum is affected the other two parts are necessarily more or less so at the same time. The most common diseases of the middle ear are inflammations, of *acute* or *chronic* nature, in the latter case being either *dry* or *purulent*.

It is however, well to differentiate what may be termed *diseases due to want of ventilation of the tympanum*. It is obvious that either excess or deficiency of air-pressure in the tympanum as compared with the pressure in the meatus will diminish the mobility of the membrane and interfere with hearing. If the air in the tympanum is not repeatedly renewed it becomes absorbed, the external pressure is greater than the internal, and the membrane is forced inwards. This may be brought about by obstruction of the Eustachian tube in its length or at its orifice, or by obstruction of the nostril (especially the inferior meatus). *Eustachian obstruction* may be due to acute inflammatory swelling of its lining in its length or at its orifice, or to chronic narrowing of the lumen, but it may also be due to *inaction of the dilators*. *Naso-pharyngeal growths*, especially *adenoid vegetations*, are a frequent cause of non-entrance of air into the Eustachian tubes, and among causes of *nasal stenosis*, the most usual are *swelling of the inferior turbinated bodies, deformity of the nasal septum, and polypi*. *Inactivity of the soft palate* is a symptom accompanying inaction of the dilators, and no doubt due to the same cause, but it may be brought about by other causes (such as hampering of its movements by *enlarged tonsils*) and it is then an etiological factor in the production of aural trouble, the swallowing of the air in the naso-pharynx being rendered possible by the non-closure of the palate during deglutition. Indrawing of the membrana tympani consequently results, but more especially when the palatal condition is accompanied by nasal obstruction. (Space forbids a more complete discussion of these interesting points).

The following are the most notable symptoms of affection of the middle ear :—(1,) *Impairment of hearing* characterized by diminution of "air-conduction" (*i.e.*, comparative inability to hear sounds con-

veyed through the air, *e.g.*, the sound of a ticking watch is not heard from so great a distance as normally without diminution, but on the contrary with increase, of "bone-conduction.") (2.) *Tinnitus aurium* or ringing in the ears, which may be of a hissing, ringing, humming crackling, "sea-shell" (*i.e.*, like the reverberations heard when a shell is held to the ear) rushing or beating character. Many of these are due to the shutting-in of the normal intrinsic sounds, and the shutting out of the external ones, or are produced by increased friction, or by contracting muscles (the "muscular sussurrus"). Such sounds are frequently relieved by Politzer's method of inflation. Others are due to the presence of fluid in the middle ear. The rushing noises are usually occasioned by venous congestion, and the pulsating noises by arterial congestion. If the arterial congestion is in the middle ear, the noise may be diminished or removed by pressure on the common carotid artery, but if in the labyrinth, by compressing the vertebral arteries as they pass round the lateral masses of the atlas vertebra in the sub-occipital region. (This was fully described by the writer J. D. G.), in a paper on Pulsatory Tinnitus, read before the British Medical Association at Brighton in August 1886, and in the "Brit. Med. Journal," 24th Dec., 1887). (3,) *Discharge* of muco-pus from the ear, often of an offensive odour. When copious, this can hardly be from any part but the middle ear, though when scanty it may arise merely from the meatus. The results of inspection and auscultation during the process of inflation of the middle ear are necessary confirmatory signs. (4,) *Vertigo*, though various in its origin is, *when accompanied by deafness*, to be accounted for wholly or in part by disease of the ear, and in most cases by disease of the middle ear, which leads to increased pressure on the labyrinthine fluid by the stapes. It is, however, the most striking symptom in labyrinthine disease. The above symptoms occur in acute and chronic affections alike. (5,) *Pain* is the most striking symptom in acute inflammations and may radiate from the ear over the whole of the side of the head. (6,) *Constitutional disturbance*, fever, delirium, etc., indicate the degree of the affection, and in severe cases of acute purulent inflammation, the symptoms may be indistinguishable from those of acute meningitis till identified by careful inspection, and sometimes only by the beneficial effect of incising the membrane.

The *appearance of the membrane* is that of *simple indrawing* in cases of non-ventilation, *congestion* of the circumference and malleal vessels extending to the entire membrane in acute inflammations, *yellow bulging* in case of pointing pus, *perforation* after the exit of pus through

the membrane, circumscribed depressions from the indrawing of thin *cicatrices* after the healing of perforations of some chronicity, extensive ill-defined depressions from *atrophic thinning* of the membrane, white crescentic patches of *calcareous deposit*, *general opacity* with *irregular puckering* and indrawing in chronic dry catarrh. When there is fluid in the tympanum behind a membrane of normal transparency, a line like a hair is seen crossing horizontally at the upper level of the fluid.

Simple non-ventilation of the tympanum is recognized by the immense improvement in the hearing when air is forced into it by Valsava's or Politzer's method, or by Eustachian catheterisation. (Vide "Treatment").

Acute Catarrh of the Middle Ear has the general symptoms of middle ear disease with pain well-marked. When *suppurative* there is more constitutional disturbance, and an early discharge of muco-pus followed usually by relief.

Chronic Non-suppurative Catarrh of the Middle Ear is of two forms: exudative and sclerotic.

The *exudative* form is usually secondary to catarrh or other affections, causing obstruction to the entrance of air into the tympanum. There is difficulty in inflating the middle ear, but improvement in the hearing power results.

The *sclerotic* form is characterised by insidious onset, with more or less constant tinnitus and gradual persistent loss of hearing power. There is not necessarily any difficulty in inflation, and there is little or no improvement after it. These sclerotic cases usually end in ankylosis of the stapes, extension of the disease to the labyrinth, and absolute deafness.

Chronic Suppurative Catarrh of the Middle Ear is a common unfavourable result of the acute form. The chief causes of chronicity are neglect and mismanagement in the acute stage, or more rarely the influence of tuberculous or syphilitic disease. When once established the affection often owes its intractability to one or other of the following local conditions, swelling of the tympanic mucous membrane, development of granulations or polypoid growths, disease of the temporal bone, while more remotely there may be disease of the nose or throat, or some inherited or acquired constitutional dyscrasia.

Mr. Barker, in the "Lancet" of June 11th, 1887, gives a very practical account of *the most dangerous results of middle ear disease*, and we here follow, with some variation, the plan adopted by him in laying down rules for guidance in diagnosis. A patient having *for the first time* acute pain in the ear with violent headache on the same side,

drowsiness, high temperature, with or without rigors or delirium, should have the membrana tympani examined, and if found red or bulging, (and not relieved by the usual treatment of acute inflammation of the tympanum), freely incised without omitting the local procedures in regard to diagnosis and treatment laid down in the principles of aural surgery.

If complete subsidence of the symptoms follows the evacuation of matter from the middle ear, the case has been one of simple *acute suppurative catarrh of the middle ear.*

If relief does not take place, but exacerbation of symptoms, optic neuritis, "cephalic cry," and cervical opisthotonos supervene, the disease is probably *meningitis.*

If there is relief of pain, but the constitutional condition remains unimproved and the temperature oscillates between the extremes, with rigors and especially if abscesses form in other parts, the disease is *pyæmia.*

Mr. Barker seems to hold the opinion that the more serious results (cerebral abscess, subdural abscess and thrombosis of the sinuses) do not occur in consequence of acute but only of chronic ear disease. During the thorough discussion the question underwent at the meeting of the Glasgow Medico-Chirurgical Society in February, 1887, the only case brought forward to controvert this view was one in which the possibility of previous ear disease was not excluded.

Supposing a patient to have *for a considerable time* suffered from chronic otorrhœa, the cessation of which has been followed by the above symptoms, the first thing to eliminate is the possibility of *blocking up of the meatus* by polypoid granulations or œdema.

These being absent or being removed without disappearance of the symptoms, and antiphlogistic treatment as well as incision over the mastoid prove insufficient, the probability of *mastoid suppuration* is so great as to call for *perforation of the mastoid process*, and drainage of the antrum. The presence of pain localised in this region, or tenderness, or œdema and redness over it, would of course go strongly to support this recommendation (Vide "Therapeutics of Ear.")

A continuance of the symptoms would lead to a suspicion of subdural abscess, phlebitis of sinuses or cerebral abscess.

The patient remaining dull and heavy with rapid pulse (except when a very large abscess produces compression enough to slow the pulse), temporal pain, probably optic neuritis, tenderness and œdema over the squamous and mastoid bones, the probability is great of the presence of *subdural abscess.* To test this and to treat it, the bone

should be gouged through at a point *half an inch above and half an inch behind the centre of the opening of the bony meatus.* If pus is found it will be above the roof of the tympanum. If pus is not found at this point the gouge must be used at a point *half an inch behind the centre of the opening* of the meatus, so as to expose and evacuate pus under the dura mater in the groove for the lateral sinus. An indication of the presence of such suppuration would be afforded by the oozing of pus from the foramen for the mastoid vein.

If pus is still undiscovered and the symptoms continue to increase in severity, we are thrown back on the probability of phlebitis of the sinuses or of abscess in the cerebrum or cerebellum. Evidence of *phlebitis of the sinuses* would be afforded by hardness and tenderness in the region of the internal jugular in case of the lateral sinus being affected, œdema of the retina and around the eye-ball with perhaps exophthalmos in case of the cavernous sinus (*vide* McBride in "Edin. Med. Journal," June 1887). The supervention of *pyæmia* would be indicated by rigors, oscillating temperature and especially by metastatic suppuration.

The above conditions are, according to Barker, very much more frequent (ten to one) than abscess in the brain or cerebellum, and abscess of the cerebrum more frequent (three to one) than abscess of the cerebellum. Prof. Greenfield, however, considers that the proportional number of abscesses is much greater.

Abscess of the brain would be indicated by the continuance of the brain-symptoms with optic neuritis (sometimes absent) especially if accompanied by *subnormal pulse and temperature* and (Gowers and Barker) *slow cerebration* (as evidenced by retarded replies and questions). The general principles of cerebral localization must be utilized, but the absence of *localising symptoms* is unfortunately not to be depended on as a proof of the non-existence of abscess (Greenfield, "Glasgow Medical Journal" 1887). This is obvious when we remember that the almost invariable seat of the abscess is the posterior part of the temporo-sphenoidal lobe where there are no motor centres. There is however, a sensory centre for audition by the opposite, and Bergman points out that loss of hearing in the opposite, ear may mean abscess in the auditory centre. *Optic Neuritis* is also an uncertain guide. Greenfield finds it inconstant in cases of abscess and its occurrence in connection with other forms of intracranial inflammation is well recognized. Barker has observed its presence in some cases of suppuration of the middle ear. With a due regard to the extent of its value the sign must not be overlooked. McBride

(op. cit.) points out that *loss of bone-conduction* indicating destruction of the auditory nerve is a symptom of value localizing the disease as under the tentorium.

The difficulties connected with the diagnosis of these diseases are obviously great, but the recent advances in cerebral surgery make their consideration a duty on the part of every surgeon who accepts the responsibility of treating cases of intra-aural suppuration.

In Dr. Gower's case Mr. Barker trephined at a point an inch and a quarter behind, and an inch and a quarter above the centre of the meatus. Finding bone and membrane normal he thrust a hollow aspirator needle (size of No. 4 cath.) inwards, forwards and downwards into the temporo-sphenoidal lobe. Pus escaped, the opening was dilated and a drainage tube inserted. Iodoform was freely used as an antiseptic. On the third day a silver tube was substituted for the rubber one, and in a fortnight was removed.

McBride recommends that the opening should be above and in front of the meatus, and regards the exploration of the cerebellar region as only justifiable when the presence of pus behind the tentorium is almost certain.

In addition to diseases of the brain as the result of suppurative inflammation of the middle ear, the practitioner should bear in mind that other symptoms may be due to aural mischief, thus :

Dr. Trautmann, of Berlin (" Congress of Naturalists," Berlin, 1886), has related a case of exudative inflammation in the middle ear, in a girl, three years old, in whom there also ensued, as a consequence, *epileptiform manifestations.*

Caries of the temporal bone is to be suspected when an otorrhœa resists ordinary treatment, or when there is a rapid re-growth of granulations after removal. By means of careful probing under good illumination, rough spots of bone may be detected. (A very useful form of probe and an adaptable ring-knife for these cases can be procured from Krohne and Sesemann, London, as made to the writer's (J. D. G.) design.)

The Mastoid Process. A *gland* on the upper part of the process may be inflamed, forming a circumscribed, more or less movable swelling. *Periostitis*, usually secondary, may occur primarily. It is a more diffused swelling than the former, and altogether more severe in its character, frequently pushing the auricle quite out from the side of the head. *Deep inflammation of the Mastoid or Mastoid Antrum* is characterised by the violent local pain following chronic middle ear disease, and the severe constitutional disturbance.

Internal Ear, Auditory Nerve, Auditory Nuclei and Auditory Centre. The general symptoms of disease of these parts are : *loss of hearing* more or less complete for "air-conduction" and "bone-conduction," the defect being, as a rule, more marked for high than for low tones, *tinnitus* of various kinds, *vertigo*, apart from cerebellar, spinal or ocular disease, *comparative absence of improvement* on treatment of middle ear. In internal ear disease our tuning-fork *may* be heard for thirty seconds longer at the meatus than on the mastoid (*vide* testing with tuning-fork) but if the middle ear is diseased the length of air-conduction will be diminished relatively to the bone-conduction, and in general the fork will be heard on the mastoid longer than at the meatus.

There are, however, some exceptions to the general principles here laid down, some of which are alluded to by Dr. McBride, of Edinburgh, ("Brit. Med. Journ.," April 10th, 1886).

It will be generally agreed, however, that in labyrinthine disease uncomplicated by disease of the tympanum, there is some shortening of the period during which the tuning-fork is heard, though the perception of the vibrations is not of necessity abrogated completely. The truth is, probably, that the fibres of Corti act so as to *reinforce* the corresponding tones, though the auditory nerve is capable of receiving and conveying the vibrations, whatever the differences in their rapidity (Number per second) which constitute the variations of pitch.

An attempt may be made to localise the seat of "nerve-deafness" on the following lines : *Labyrinthine* disease is chiefly characterised by the loss of equilibration and, as we have seen, the equivocal results of the tuning-fork test. Affection of the *auditory nerve* inside the skull is frequently the result of local disease (tumour, etc.) but it does not inflame, and atrophy as the optic nerve does from the mere presence of tumours in the cranium. The *auditory nucleus* is unlikely to be affected without the nucleus of the fifth nerve being simultaneously implicated. The *auditory cortical centre* for either ear lies in the first temporal convolution of the opposite side. The concomitant symptoms of disease of that portion of the cerebrum (paralysis, headache, optic neuritis, etc.) would help us, and when the affection is on the left side there is loss of the power of understanding spoken words (see Gower's "Dis. of Brain").

Congestion of the internal ear may be recognized by more or less nerve deafness with pulsating noises relieved by pressure on the vertebral arteries (J. D. G.) and may be due to vaso-motor disturbances (as from the digestive or generative organs) to drugs such as

salicine, quinine, nitrite of amyl or nitro-glycerine, or to acute middle ear disease. *Anæmia* has deafness, giddiness, and noises (chiefly humming) and all those symptoms are relieved by lying down.

The chief acute forms of deafness from internal ear disease are the *secondary syphilitic* and *hæmorrhagic*. The latter constitutes Menière's disease, and has usually headache and sickness and disturbance of equilibrium and consciousness, often apoplectiform in character. Syphilitic disease cannot be diagnosed without confirmatory evidence.

The internal ear is not infrequently affected in *meningitis*. The auditory nerve may be implicated in the disease at the base of the brain, and the inflammation may penetrate to the labyrinth through the internal auditory meatus, or more probably through the aqueductus cochleæ. It accounts for a number of cases of deaf-mutism.

The most important class of cases of chronic disease of the internal auditory apparatus consists of those arising from syphilis, acquired or congenital. The permanent acquired forms probably come on in the so-called tertiary stage (those in the secondary stage are generally spontaneously or medicinally curable). The history is an important guide. The congenital form is usually preceded by disease of the cornea and iris, and accompanied by the other signs of congenital syphilis (Hutchinson, "Teeth," etc.)

Injuries of the auditory apparatus. The membrane may be ruptured by pointed objects pushed into the meatus, or more frequently by "boxes" on the ear. Fractures of the base of the skull usually penetrate some portion of the auditory apparatus. The tuning-fork will often assist in the diagnosis of the portion injured. Concussion of the labyrinth occurs from blows on the head, and is usually diagnosed by its being recovered from.

EAR (General Therapeutics). *Urban Pritchard, M.D., F.R.C.S.*

Congenital Malformations of the Auricle and external meatus are, as a rule, best left alone.

Sebaceous Cysts and Tumours of the Auricle should be removed by enucleation as in other parts of the body. Hæmatoma auris or othæmatoma may be successfully treated by aspiration by means of a subcutaneous syringe, followed by injection of dilute **Tincture of Iodine** (Tinc. Iodi. ʒj ; Aq. ʒij), which, after remaining in the cyst about five minutes, should be evacuated in the same way. This usually sets up sufficient adhesive inflammation to destroy the cyst.

Collapse of the Meatus, which is becoming a very rare condition now that the old-fashioned custom of wearing bonnets tied closely

over the ears has passed away, is best treated by the patient wearing a meatus tube until the meatus itself has recovered its normal calibre.

Obstructions in the Meatus.—The syringe should be used in all cases of cerumen, desquamated epidermis, etc. A two-ounce brass syringe, with a small nozzle, is the best for this purpose, filled (without allowing any air to enter) with pleasantly warm water. The surgeon should straighten the meatus by drawing the auricle outwards with a little twist. The fine jet of water should then be directed so as to pass between the wall of the meatus and the obstruction; by this means the water strips the plug from the meatus and the return current drives it out. The meatus should be examined from time to time during the operation, to prevent the danger of syringing on to the naked drum after the obstruction has been removed. In all cases where the plug is very hard, or where the meatus itself is tender, softening instillations, as **Glycerine** ℥j, water ℥ij, should be used for some days previous to the syringing.

Occasionally, when the obstruction is made up entirely, or almost entirely, of epidermic layers, the syringe will fail to remove the mass without the assistance of other instruments. In such cases a *flattened* (not sharpened) probe, and a pair of fine forceps may be used, but these must never be employed without thorough illumination and extreme care.

Foreign Bodies.—For the removal of these the syringe should, almost invariably, be first tried; for unless the foreign body is firmly impacted, it can always be removed in this way. If other instruments have to be used, thorough illumination and extreme care are again absolutely necessary. When the foreign body is close to the opening of the meatus, a blunt hook or a loop of wire may be safely used. If deeper down, the operation becomes one of great delicacy, and should only be undertaken by experienced hands. Ordinary forceps should never be used except when the foreign body consists of cotton wool.

Inflammation of the Meatus.—Furunculi producing circumscribed inflammation of the cartilaginous portion of the meatus should be incised early. A small blister should be placed behind the ear, and when the pain is very great, a couple of leeches may be applied just in front of the tragus. Poultices and hot fomentations are of great service, but should not be continued after the pain has subsided. A diluted mercurial ointment, kept constantly applied to the surfaces for about a fortnight after the pain has disappeared, will prevent recurrence.

Diffuse inflammation of the meatus, so commonly produced by bathing, should be treated by blistering behind the ear, and by leeches if the inflammation is very acute, together with warm and soothing injections, such as solutions of **Morphia** and **Lead**. These may be followed, when the pain has passed off, by insufflations of finely powdered **Boracic Acid**. Forcible syringing, in such cases, must never be employed.

Eczema.—This must be treated on the same lines as eczema on other parts of the body, together with occasional warm water injections, to get rid of any *debris* that may be accumulating in the meatus. The patient should not wear cotton wool in the ear.

Exostoses of the Meatus rarely necessitate any active treatment, but when single, and tending to completely block the meatus, they should be removed.

Rupture of the Membrana Tympani and wounds of the meatus should be treated, as far as possible, in a strictly expectant manner. Injections are to be avoided, unless a free discharge has been set up.

Acute Inflammation of the Tympanum must be treated according to the severity of its symptoms. In the milder form, such as is met with in the common ear-ache of childhood, mustard behind the ear, hot fomentations, and an aperient should be prescribed. And it is usually necessary, in these cases, to attend to the pharynx, as some catarrhal affection of this part is generally the predisposing cause of the inflammation, and therefore, without such attention, there is a great tendency to recurrence.

Severer cases will require blisters behind the ear, leeches in front of the tragus, a warm water douche and smart purgatives. Sedative instillations, such as solutions of **Morphia** (2 grs. to ℥j) or **Atropine** (1 gr. to ℥j), may be used to deaden pain, and hypnotics may be necessary to produce sleep.

When the pain is very severe and leeches fail to give relief, an incision should be made on to the mastoid process about half an inch behind the auricle and parallel with it. This incision should be carried down to the bone, but care must be taken that the knife does not pass beyond the mastoid process.

If the membrana tympani is seen to be bulging from pressure of fluid behind, it should be incised *under good illumination*. If the membrane is already ruptured and a discharge has made its appearance it may be advisable to use some warm soothing injection, such as **Lead** and **Morphia**. It is only right, however, to state that some authorities object to the use of any injection during the acute stage.

After all pain has gone, inflation by means of Politzer's bag should always be practised to open up the Eustachian tube and to break down any commencing adhesions. Many cases of permanent deafness might be obviated if this rule were always observed.

Chronic Non-suppurative Catarrh of the Middle Ear.—Before commencing to apply any remedies it may be necessary to remove such obstructions as adenoid vegetations, or enlarged tonsils where they exist. This having been done, the two objects to be striven for are (1,) the reduction of the catarrh, and (2,) free ventilation of the tympanum. The first of these may be attained by the use of applications to the naso-pharynx, to the Eustachian tube, or to the tympanic cavity itself.

Nasal Injections are of very great service in treating catarrh of the naso-pharynx; they may be used either as the ordinary nasal douche; that is, syringing up one nostril and allowing the fluid to flow down the other; or else by means of a small glass syringe the fluid is to be injected slowly along the floor of the nostrils while the head is tilted a little backwards, it being afterwards spat out of the mouth. In selecting the form of injection it must be remembered that the mucous membrane of these parts is very irritable, and will not stand any strong remedy. Again, there is with some patients a danger of syringing right through the Eustachian tube, and thereby setting up inflammation of the tympanum. This, however, may be avoided by using the small glass syringe, very mild solutions, and by avoiding blowing the nose forcibly after the injection. The following are suitable nasal injections :—

1. As much table salt as will lie (piled up) on a shilling to a wine-glass of warm water.

2. ℞ Pulv. Ammon. Chlor. ʒss | Pulv. Sacchar. Alb. ʒij
   Mix. A teaspoonful to a wine-glass of warm water.

3. ℞ Pulv. Pot. Chlorat. ʒss | Pulv. Sacchar. Alb. ʒij
   Mix. A teaspoonful to a wine-glass of warm water.

4. ℞ Glycerin. Boracis.
   A teaspoonful to a wine-glass of warm water.

5. ℞ Pulv. Sodæ Bicarb.
   As much as will lie on a shilling in a wine-glass of warm water.

6. ℞ Glycerin. Acid. Tannici. ʒiij | Aq. ad. ʒiij
   Mix. A teaspoonful to a wine-glass of warm water.

Gargles of **Chlorate of Potash, Tannin, Alum,** etc., are very useful as adjuncts to nasal solutions, and instead of them, in those cases

where the mucous membrane of the middle ear is very susceptible to inflammatory attacks.

Paints in the form of **Glycer. Acid, Tannici, Perchloride of Iron** and **Glycerine** (**Liq. Ferri Perchlor.** and **Glycerine**, equal parts); and solutions of **Nitrate of Silver** (15 to 30 grs. to ℥j), may sometimes be used with great advantage, especially when the patient is unable to gargle. To use these a large bent throat brush must be employed, and this must be passed well up behind the soft palate towards the Eustachian tubes.

The foregoing applications to the naso-pharynx affect the mouth of the Eustachian tube; but if we desire to treat the tube generally and the tympanic cavity also, further methods must be adopted.

Fluids (a few drops of a warm solution of **Bi-carbonate of Soda, Chloride of Ammonium**, or **Iodide of Potassium**), may be introduced through the Eustachian tube into the tympanic cavity by means of the Eustachian catheter. But many authorities regard this method of treatment as attendant with so much danger of producing acute inflammation that they have ceased to use it in the case of all children and of young adults.

Vapours may be introduced into the Eustachian tube and tympanum by any one of the usual methods of inflation, namely, Valsalva's, Politzer's, or by the catheter. Fumes of **Chloride of Ammonium**, as produced in Kerr's, Hawksley's, Basdon's, or Verriker's inhaler, form a very excellent fumigation for the naso-pharynx; and by means of Valsalva's inflation they can be readily introduced into the Eustachian tube and tympanum. This forms a very satisfactory method of treatment in cases of dry catarrh or whenever the mucous membrane is too irritable to bear a nasal solution. In very chronic cases **Iodine** and **Ether** vapours introduced by Valsalva's process are often prescribed with advantage (30 minims of **Tincture of Iodine** and 10 minims of **Ether** are put into an earthenware inhaler with about half a pint of hot water). When using this care must be taken not to draw the vapour into the lungs. The use of warm vapours containing **Tinct. Benzoin Co., Pine Oil**, etc., in the same way, is also advocated by some authorities.

The second object is that of obtaining free ventilation of the tympanum. In cases of catarrh the Eustachian tube becomes more or less obstructed on account of the swelling of the mucous membrane and, in consequence, the tympanic cavity cannot receive its proper supply of air. Some means of re-opening the tube so as

to introduce air therefore becomes necessary, and this may be done by one of the following methods.

Valsalva's.—This is performed by holding the nose, closing the mouth, blowing out the cheeks forcibly and, at the same time, attempting to swallow. In many cases of slight obstruction this method is most useful, but very often it is not sufficient, and moreover a too frequent repetition of it is apt to do harm.

Politzer's Method.—Perhaps the handiest way of using Politzer's bag is as follows :—The patient should be given a sip of water to hold in the mouth, which must be firmly closed, with the head thrown a little backwards. The nozzle of the bag is then introduced into one nostril, the nose being held so as completely to block up the other. The patient is now told to swallow the water, and the bag must be squeezed forcibly immediately after the larynx has been seen to move.

The Eustachian Catheter is introduced along the inferior meatus of the nostril, keeping its point close along the angle formed by the septum and the floor. Soon after passing the posterior nares the back of the pharynx is encountered ; this is easily recognised by its tension. The instrument should then be withdrawn about half an inch, the point turned almost directly outwards ; after which, on the catheter being again slightly pushed inwards, the point will enter the Eustachian tube. The tympanum may now be inflated either by means of the mouth or by the use of a Politzer's bag adapted to the catheter.

Of these three methods Politzer's is generally to be preferred.

In an ordinary case of chronic middle ear catarrh, a nasal solution used by the patient twice a day, and Politzer's inflation practised by the surgeon from once a day to once a week, form perhaps the most satisfactory method of treatment.

Chronic Suppurative Catarrh of the Tympanum, or Internal Otorrhœa.—In this disease the condition of the lining of the tympanic cavity has been so altered that pus is secreted ; and this, passing through a perforation in the membrana tympani, appears as a discharge.

The indications for treatment are (1,) To subdue the suppurative disease and to render the surfaces healthy ; and (2,) To heal the perforation in the membrana tympani. This latter is almost entirely dependent upon the success of the former, because a perforation rapidly heals—either across or at its margin—when the discharge has ceased.

To subdue suppuration in a simple case thorough cleansing, by means of such warm injections as the following, is usually sufficient :—

1. ℞ Zinci Sulph. ʒj | Aq. ℥x
   Glycerin. Acid. Carbol. ʒss |
   Mix. A tablespoonful to a wine-glass of warm water.

2. Sol. (saturated) Acid. Boracic. ʒij.
   To be used with enough hot water to make it pleasantly warm.

3. Boro-glyceride (Barff's).
   A teaspoonful in a wine-glass of warm water.

4. ℞ Glycerin. Acid. Carbol. ʒss | Spt. Vini Rect. ℥x
   Mix. A tablespoonful in a wine-glass of warm water.

In a large number of cases, however, something more than a mere injection is required ; and then one of the following methods should be adopted :—Instillations ; dry treatment ; absorbent treatment.

Instillations.—After the ear has been cleansed with some antiseptic injection and thoroughly drained, it should be completely, or almost completely, filled with the instillation which must be slightly warm, the patient lying so that the affected ear is uppermost, and remaining in that position for at least 20 minutes after its introduction.

1. Liq. Plumbi Subacet.
   To be used with an equal proportion of warm water.

2. Sol. Argent. Nit., grs. x to xx to ℥j.

3. Alcohol (Spt. Vini Rect.)
   To be used with two or three times the quantity of warm water at first, rapidly (if the ear tolerates it) increasing the alcohol until it is used pure.

4. Pulv. Acid. Bor. ʒiss | Spt. Vini Rect. ℥iij
   Mix. To be used in same way as No. 3.

Dry Treatment.—After the meatus has been thoroughly cleansed by syringing, or by mopping out with cotton wool, or both, it must be filled by one of the following substances finely powdered :—**Pul. Cretæ Gall., Pulv. Acid. Tannici, Pulv. Acid. Boracic.**

Absorbent Treatment.—This is most applicable where there is only a slight discharge. A long wick-shaped piece of absorbent cotton wool is to be inserted into the meatus by means of a pair of forceps, and then gently pushed down so as to rest on the membrana tympani. This must be changed once or twice a day according to circumstances, the meatus being cleansed each time if necessary. Ordinary **Absorbent, Boracic** or **Salicylic Acid Cotton Wool** may be used for this purpose.

The hearing power in many of these cases may be considerably improved by the use of Politzer's method of inflation from time to

time. Again, where the perforation is large the use of an artificial tympanum will often greatly improve the hearing power.

Granulations and Polypi.—The former, when large, may be cauterized with **Nitrate of Silver, Chromic Acid, Perchloride of Iron**, etc., and then treated with strong alcoholic instillations, provided that there is no tendency to acute inflammation. Polypi should be removed by means of forceps, the snare, the ring-knife, etc., and then treated in the same way as granulations. When granulations or polypi are the result of periostitis, counter-irritation behind the ear should be employed.

Caries and Necrosis.—The use of strong alcohol, **Chromic Acid,** and other active irritants is here contra-indicated, and sometimes to attempt rapid healing by means of Boracic Acid is unwise. Besides the injections given above, the following decalcifying solution may be employed :—

℞ Acid. Nit. Fort.	℥ij	Misce et adde	
Aq.	℥viiss	Glycerin. Acid. Carbol.	℥ss

M. 1 ounce to be used with twice the quantity of warm water (a bone or metal syringe must not be employed.)

Mastoiditis.—In acute mastoiditis an early incision should be made down to the mastoid process right through the periosteum. If this fails to relieve the pain, then an opening should be made into the mastoid cells, either by means of the drill or the chisel. When the drill is used the following mode of procedure is recommended. A vertical incision of about 1½ inches long having been made on the mastoid process about half an inch behind the auricle, an assistant should draw forward the auricle so as to allow of its being dissected forwards until the margin of the meatus is felt. The somewhat well defined upper margin being taken as a guide, the drill is applied about one-eighth of an inch behind the meatus, and in drilling, the point should be inclined a little forwards so as to follow a direction almost parallel to the meatus. If the cells are not reached after penetrating half an inch the surgeon should stop. This operation requires great care on account of the close proximity to the lateral sinus, and for this reason a drill is preferable to the ordinary trephine.

In chronic mastoiditis the object of treatment should be directed to obtaining a free passage through the mastoid cells and meatus ; and therefore, where no opening has been made by the disease through the mastoid process, the surgeon should drill as directed above.

AFFECTIONS OF THE INTERNAL AND AUDITORY NERVE.

Congenital Syphilis affecting the internal ear, when confirmed, is

quite unamenable to treatment. In the early stage frequent counter-irritation and rigid hygienic treatment will sometimes yield very favourable results.

Meniere's Disease.—Large doses of **Bromine** in some form, such as **Bromide of Ammonium or Hydro-bromic Acid**, will arrest the disease in a certain number of cases. Occasionally **Salicin** or Salicylate of Soda will succeed where **Bromine** has failed. Again large doses of **Quinine** have been recommended by some authorities.

ECTYMA *N. Whitelaw Bourns, M.D.*

Is in a large majority of cases a complication of other diseases, as scabies, pityriasis, and such affections where itching is a prominent symptom. When occurring primarily the general health is always very much below par, as from insufficient food, and over-crowding. The disease is therefore rarely seen in the upper walks of life. The indications for treatment are to improve the general health by attending to the hygienic surroundings, good food, tonics, and open-air exercise, locally, alkaline baths for removal of crusts, and to allay irritation. Duhring gives the following formula :—

℞ Ungt. Zinci Ox. Benz.	℥ss	Hydrargyri Ammoniati	ʒj
Vaseline	℥ss	M. Ft. Ungt.	

ECZEMA *N. Whitelaw Bourns, M.D.*

Is the most common of skin diseases, and considering the many varieties of the affection, its numerous stages, and the vastness of the literature on the subject, we cannot hope in the space at our disposal to do more than give a general indication for treatment, with a few selected prescriptions, and then, however reluctantly, we must pass on, hoping that those interested in the subject may have no trouble in laying their hands upon some of the many books or monographs on the disease, which are constantly being brought before the notice of the profession.

Eczema is no longer looked upon as a vesicular eruption, but as an affection, which may present most varied manifestations, starting as a slight erythema, as a pustular, vesicular, or papular eruption. The whole aspect of a case of eczema is not infrequently transformed within a few hours, as from an erythematous patch to a red weeping area, or again to a dry thickened desquamating surface. No class of society, no age, from the cradle to the grave, and no part of the cutaneous surface is exempt from the ravages of this most troublesome affection.

The treatment, to be most successful, must be both constitutional and local, though in some cases internal treatment is almost alone

called for, while in others the disease rapidly subsides under local medication.

The diet, both in acute and chronic eczema, demands our careful attention, as any derangement of the digestive tract may frustrate our best efforts, therefore, generally speaking, a light nutritious and easily digested dietary is called for.

The state of the kidneys must be enquired into, and the bowels kept freely open by saline aperients, or mild mercurials. In old people, with a gouty or rheumatic tendency, alkalies and diuretics are indicated. When stimulants are required, McCall Anderson advises increasing doses of the **Carbonate of Ammonia** up to 40 grains. In debilitated and scrofulous patients, particularly during childhood, **Cod Liver Oil, Arsenic, Iron, Strychnine,** and **Quinine** are most effectual drugs.

Local Treatment.—Our first care must be complete removal of all crusts, followed by soothing applications in the form of powders or ointments. McCall Anderson uses Taylor's **Cinolite Dusting Powder** (prepared white Fuller's earth). (J. Taylor, 13, Baker Street, Portman Square, London).

In the acute stages, ointments are the most suitable applications, and Crocker's formula for the **Oleate of Zinc** answers very well.

℞ Zinci Oxidi	ʒj	Vaseline	ʒix
Acidi Oleici	ʒviij		

Rub up the oxide of zinc, with the oleic acid, and let it stand for two hours, then place it in a water bath until the zinc is all dissolved, add the vaseline, and stir until cold. Or instead of the oleate of zinc, we may use an ointment of the **Oleate of Lead** or **Bismuth.**

When there is much infiltration of the skin, Hebra's treatment with potash applications is now generally employed, the strength being regulated by the extent of the disease and amount of infiltration. McCall Anderson advises **Liquor Potassæ** to be painted over once a day, and neutralized by tepid bathing if the smarting is troublesome. ("Dis. of the Skin," p. 157).

Duhring frequently uses the following ointment :—

℞ Zinci Oleatis	ʒiss	Vaseline	ʒiv
Adipis Benzoatis	ʒiij	Bals. Peru.	gr. v

M. Ft. Ungt.

Also for vesicular eczema :—Pulverised camphor, 1 gramme 15 centigrammes ; oxide of zinc (pulverised), 7 grammes ; glycerine, 1 gramme 75 centigrammes ; lard and benzoin, 20 grammes. This ointment is recommended in the beginning of the disease The

treatment should be commenced by the application of isolating powders, such as lycopodium, talc, and the subnitrate of bismuth.

McCall Anderson speaks highly of the following as a soothing ointment :—

℞ Bismuthi Oxidi	℥j	Vaseline	℥ix
Acidi Oleici	℥viij	Olei Rosæ	♏v
Ceræ Albæ	℥iij		

This ointment is made in the same way as the oleate of zinc ointment.

Dr. Lawrence uses **Permanganate of Potassium.** In the case of a child, two years of age, who was covered with eczema and impetigo, he ordered a daily bath of permanganate of potassium, of the strength of 15 grains to the bath of water, the child to remain in it till the water turned brown. Fourteen days afterwards he was well. Since then Dr. Hullman has used the remedy both in adults and children, and mostly with good effect. When the skin is much covered with scales or scabs it should first be well brushed with soap and water. In another case of very chronic eczema of the back of the hand, where the usual remedies had been tried without success, a solution of 10 grains of the salt to an ounce of water was applied freely with a brush. The disease disappeared in about ten days. A third case of eczema of the face in a young lady also yielded to the treatment in fifteen days.

Eczema of the Eyelids.—McCall Anderson strongly advises extraction of the eye lashes, and if there is much infiltration, he uses a solution of **Potassæ Fusa,** 10 grains to the ounce of water. The eyelid being carefully dried and everted, a small quantity of the solution is painted over its edge, and the action stopped at any moment, when desired, by brushing the part freely with cold water. The operation may be repeated every few days, and followed by the application of a dilute **Nitrate of Mercury Ointment.**

Eczema of the Nares.—Dr. Baumgarten, of Budapest, advises in cases where the skin is much infiltrated and covered with thick crusts, to epilate the large hairs and to run into the part with a pledget of cotton some white precipitate ointment, so as to make it penetrate the skin and cause it to become more pliable. ("Monatsh. f. Ohrenheilk." 1885 ; "Journ. of Cutan. and Ven. Dis.," vol. iv., No. 10.)

Eczema Circinatum.—In the clinics of St. Louis Hospital, Dr. Besnier's treatment is (Brocq's Report in "Journ. of Cutan. and Genito-Urin. Dis.," vol. v.. No. 4, 1887) ; (1,) To regulate the general condition of the patient, looking after the various functions of the body, and

prescribing an appropriate alimentary hygiene. (2,) To enforce cutaneous hygiene, removing from the skin the irritating products which sojourn upon its surface. (3,) To suppress all other causes of irritation of the skin, and particularly direct contact of woollen and flannel clothing. The patient must bathe the affected portion of the skin each morning with warm water and soap without soaking the parts too much; then, having powdered over with starch powder, a piece of old soft linen is placed between the skin and the undershirt. In most cases these simple measures suffice to cause a disappearance of the eruption. If, however, it persists, we should prescribe an ointment. Dr. Besnier recommends especially in this case one of sulphur, for sulphur prevents the alteration of the products of the glands of the skin.

Eczema Palmarum et Plantarum.—Duhring recommends the following ointment:—4 drachms of **Tar Ointment**, 4 drachms of **Vaseline** with ½ a drachm of **Calomel**. ("Diseases of the Skin.")

ELECTRICITY (in Diseases of Women). *John W. Taylor, F.R.C.S.*

I.

Electricity as a therapeutic agent in diseases of women is not only coming prominently into notice, but is being largely used as a routine method of treatment by a very considerable number of gynæcologists and electricians.

The chief diseases in which it is found to be useful, are *uterine myoma*, *chronic metritis*, and *endometritis*. It has also considerable power for good in the treatment of various *neurosal affections* connected with diseases of the uterus and ovaries, both functional and organic.

The methods employed have been mainly those used by Dr. Apostoli of Paris, and these will form the basis of description in the following sketch, being, so far as is known at present, more scientific and successful than those employed by any previous or contemporary operators.

The apparatus required is:—

1. *For Galvanism.* A good continuous current battery, of from 30 to 40 cells, with a galvanometer graduated to 250 (or more) milliampères, and suitable abdominal, intra-uterine, and needle electrodes: and

2. *For Faradism.* A faradic machine, with movable coils, so that the strength of the (interrupted) current may be carefully graduated.

These instruments are supplied by Messrs. Coxeter, of London, or

Messrs. Gaiffe, of Paris, (Rue S. André des Arts). They cost about £26, and merit some detailed description.

The *Battery*, containing 36 cells, is mounted in an oak case, and is an important piece of furniture, both as regards size and weight. The cell used is a modification of the Leclanché element excited by a chloride of zinc solution, and it is only while the circuit is closed that any action can take place. This prevents undue waste, and the battery, even if used every day, is stated to keep in working order, without re-charging, for nearly two years. By a double dial collector each cell can be brought into action separately. This battery is essentially non-portable: a smaller one must be used if it is required to be moved from place to place.

A *Galvanometer* is attached to the battery, and measures the strength of the current that is passing when the circuit is closed. This by no means exactly corresponds to the number of cells as some have imagined. The resistance of the tissues varies greatly in different people, and the polarization of cell and tissues, after the current has been passing for a time, together with chemical changes in the cell, will detract from its power. The galvanometer, accordingly, is the only accurate measure of the dose of electricity employed, and its use has done more than anything else to place the therapeutic value of galvanism on a scientific basis.

The *abdominal* or *cutaneous electrode* is a special invention or adaptation of Dr. Apostoli. It is made of fine modellers' clay, moulded, while quite moist, into a flat cake (about 10in. by 7in., and $\frac{3}{4}$in. thick) and enclosed in muslin. Into the upper surface of the clay is pressed a thin plate of metal which is connected with the battery by an insulated wire. When in use it covers the lower part of the abdomen, and will allow the application of very high currents without injury to the skin; and probably with less pain than when another kind of electrode is used. This is its special use; it enables a much larger dose of electricity to be borne than was possible with former appliances.

The *intra-uterine electrode* is a partially-insulated sound of platinum attached to a movable handle. The *needle electrodes* are made of steel, and are used for negative puncture in the treatment of myoma.

The *Faradic machine* (Appareil Electro-médical Volta Faradique à helices mobiles du Dr. A. Tripier) is simply a very perfect form of the well-known apparatus or battery for the use of the induced or Faradic current. By a double and reversible secondary coil (fine and coarse) which is moved opposite a graduated scale, the very finest gradations

of effect may be produced, so that a current which is absolutely imperceptible to any part of the body less sensitive than the tongue or lips may be very gradually increased to one of painful intensity.

There is also an arrangement of mechanism lately added by M. Gaiffe, by means of which the frequency of the interruptions is controlled and regulated.

With this machine, which may very conveniently be set in action by cells outside its case as well as within, the *bi-polar vaginal* or *rectal electrode* of Dr. Tripier, and the similar *bi-polar intra-uterine electrode* of Dr. Apostoli are generally used. These electrodes are all termed "bi-polar," because the positive and negative poles terminate within a short distance of each other in the one electrode, and therefore entirely within the cavity into which the instrument is inserted.

II.

Such being the *armamentarium*, how is it to be used, and what effects can we expect to produce with it? These questions will be considered, first, according to the direct teaching and practice of Apostoli, and secondly, under the light of such criticism or modification as personal experience and contemporaneous literature have already suggested.

First (according to Apostoli) :—

(a) In uterine myoma galvanism alone is employed. When hæmorrhage is an important symptom the treatment is usually commenced by the use of the positive pole to the interior of the uterus. When this symptom is controlled, and in all cases where hæmorrhage is not marked, the negative pole is used to the interior of the uterus, or, preferably, to the substance of the myoma itself, by puncture from within the vagina.

"*Negative Galvano-puncture*" for myoma is thus performed. The patient lies on her back—her buttocks being brought close to the edge of the couch and her feet supported by "rests." All underclothing being loosened, the clay electrode is applied directly to the surface of the abdomen above the pubes, and is held firmly in position by the patient herself, if conscious, or, if an anæsthetic be used, by an assistant, or bandage. The operator stands or sits directly in front of the perinæum and, having washed out the vagina with an antiseptic solution, passes the insulated steel trocar sound-wise to some fairly prominent part of the myoma, usually behind the cervix. The point of the trocar is protected by the insulating sheath until the instrument is in position. The mucous membrane is then punctured, and the handle of the trocar depressed against the perinæum, thus directing

the point of the trocar forwards in the axis of the uterus. By this means any possible danger of wounding the peritoneum is said to be avoided. The puncture, however, is never deep, about a quarter-of-an-inch being the usual limit. The length of metal to be left uninsulated for the purpose of puncture is determined (and the sheath adjusted accordingly), previous to passing the trocar. The "puncture" being made, the trocar is held by the surgeon in the position already indicated, and the negative pole of the battery is attached to it—the wire from the clay electrode being connected to the positive pole. One cell after another of the battery is now brought into action, until a current of 100 to 150 milliampéres, as shewn by the galvanometer, is passing through the tumour. This limit is rarely exceeded at a first application, but at subsequent sittings when the patient has become accustomed to the use of the galvanic current, the strength is increased to 200 or 250 milliampères. If the patient be conscious her own sensations are a guide as to the dose employed. Beyond 200 milliampères the current usually causes unbearable pain. Whatever the limit of strength determined as advisable, this is maintained during a period of from five to ten minutes, at the close of which the cells are shut off one by one until the battery is "at rest." The trocar and the clay electrode are then removed. The vagina is again washed out with the antiseptic solution, and a strip of iodoform gauze being inserted within it, the patient is allowed to rest for some considerable time before returning to her home.

Such is negative puncture for *myoma* as carried out by Dr. Apostoli. Considerable purulent discharge takes place from the site of puncture. The iodoform gauze is renewed every other day, and the sittings are repeated about once a week. Under this treatment it is maintained that the tumour decreases in size. The symptoms of pain and hæmorrhage are thoroughly controlled, and in a considerable number of cases absolute cure results.

(*b*) In *chronic metritis* and *endometritis* the galvanic current is employed by means of the platinum sound introduced within the uterine cavity and connected with one pole of the battery while the clay electrode (connected with the other pole) is applied over the hypogastrium as described under "galvano-puncture for myoma." The indications for the use of the positive or negative pole within the uterus are thus formulated by Apostoli.

"The positive pole, acid, anti-congestive and hæmostatic is most useful in the hæmorrhagic, congestive, or ulcerative forms of metritis: it antagonizes and prevents the tendency to excessive vascularisation,

and for the same reason becomes the chosen remedy for rebellious leucorrhœas."

"The negative pole, basic, diffluent, and but slightly hæmostatic, is, on the contrary, destined to excite languid or obstructed circulations, or the indurations of chronic metritis by a powerful intra-uterine stimulus. This is the treatment 'par excellence' for chronic indurated metritis accompanied by amenorrhœa or dysmenorrhœa, and will adapt itself with similar success to other inflammatory processes in which hæmorrhage does not predominate."

In these cases an anæsthetic is never necessary—nor is it advisable.

The intensity of the current employed is gradually increased in consecutive *séances* until a strength of 200 or 250 milliampères is borne by the patient without complaint. The *séances* are usually repeated twice a week, each lasting about ten minutes and followed by a period of rest—preferably in the recumbent position.

When marked improvement has occurred, a longer interval of time may be allowed to elapse between the *séances*—one every week or fortnight being possibly sufficient until the patient is cured.

(*c*) The *nervous affections* in which the use of electricity is recommended by Apostoli as decidedly beneficial are the following :—

(1,) Ovarian neuralgia and tenderness.

(2,) The pain in chronic forms of peri-uterine inflammation ("parametritis," "perimetritis.")

(3,) Some cases of vaginismus.

(4,) Vomiting (reflex).

In *ovarian neuralgia* and *tenderness* faradism is employed, the current being applied directly to the interior of the uterus by means of the bi-polar intra-uterine sound. The fine coil is used, the strength of the current being gradually increased and its application continued until the patient can bear deep and severe abdominal pressure in both iliac regions without flinching. At this stage the patient usually voluntarily states that she is free from all pain.

In *chronic peri-uterine inflammation*, the treatment is commenced by the use of faradism as in the preceding section ; the strength of the current, however, being very moderate and carefully regulated when there are any signs of inflammation present. After the pain has been relieved by several faradic applications the local swelling or induration is treated by negative puncture as in myoma.

In all cases faradism with the fine coil is considered as exercising a sedative and "calming" effect on the ovarian and uterine regions when pain is present.

In *vaginismus* where no definite cause is found, the faradic current is applied by the bi-polar vaginal electrode of Dr. Tripier.

In *reflex vomiting*, simultaneous galvanization of the two pneumo-gastrics in the neck is recommended. Ordinary handled electrodes are used. The electrode connected with the positive pole of the battery is applied over the course of the pneumo-gastric of one side, while the negative electrode is applied in the same way to the pneumo-gastric of the other side. The dose varies from 5 to 10 milliampères, and the treatment is repeated frequently (as often as twice a day) while the symptoms remain at all urgent or rebellious.

The same treatment is recommended for gastralgia and dyspepsia of uterine or pelvic origin.

Some statistics in connection with his treatment of myoma of the uterus and chronic metritis were given by Dr. Apostoli at the Dublin meeting of the British Medical Association. Of two hundred and seventy-eight cases of myoma or "hypertrophy of the uterus in some manifest degree," seven were subsequently submitted to hysterectomy, and all of these died; 95 per cent. of the remainder are stated to have been permanently benefited. Two patients out of a total of four hundred and three of all kinds treated by the galvanic current died while under this treatment: one from a suppurating ovarian cyst, the other from a deep puncture which caused intra-peritoneal gangrene. One could wish that more information had been given respecting the cases deemed successful. The degree of success after treatment in cases of myoma must vary considerably and evidently needs tabulation as regards (*a*) hæmorrhage (*b*) pain, (*c*) locomotion, and (*d*) size of tumour. The "95 per cent." leaves much to be desired.

III.

What light from contemporaneous literature or experience can we already bring to bear upon this subject, as confirmatory or otherwise, of the opinions expressed and treatment advised in the preceding section?

In the "American Journal of Obstetrics" for February, March and April, 1887, Dr. Cutter reports a series of fifty cases of uterine myoma treated by galvano-puncture. The method adopted, however, was very different from that which has been described, especially as regards the manner of applying the galvanic current: the tumour being pierced by sharp electrodes through the abdominal wall.

Several of the cases reported were attended by disastrous consequences, but out of the series of fifty, in upwards of twenty cases the growth is stated to have been arrested, and in eleven cases a complete

cure followed the treatment used. In the "British Medical Journal" of Nov. 5, 1887, Dr. Holland reports a case of myoma treated by electrolysis. This was followed by marked pyrexia, sloughing and extrusion of the tumour through the cervix. Removal by the écraseur at two sittings fortunately finished the operative cure of the case and recovery was complete. In another case, orally reported to the writer, electrolysis for myoma was followed by serious pyrexia which, for a time, threatened to have a fatal termination. These cases serve to point out the powerful nature of this method of treatment, the care necessary in its use, and some of the special difficulties and dangers that may follow its employment.

They may also serve to emphasize the fact that this treatment of myoma and metritis by currents of high intensity is essentially new, and has but little in common with earlier methods of galvanism; and those who remain satisfied with currents of low or only moderate strength, and do not gradually increase the dose until a strength of 200 milliampères or more is borne by the patient, will be almost certain to fail in doing any permanent good. Above 200 milliampères, the direct local effect produced in many cases is very marked. The whole of the cutaneous surface covered by the clay electrode may be reddened as by a mustard plaister, and the vagina may be filled with sanious froth from the chemical decomposition which is taking place within the uterus.

Under these circumstances, the improvement obtained is often very considerable and rapid, especially as regards the symptoms of hæmorrhage and pain. Failures sometimes occur, but in the experience of others as well as myself, the effect for good has occasionally been brilliant and beyond the expectation of the operator.

The immediate difficulties and dangers of the applications are but slight, if the directions already given be closely followed. The clay electrode needs to be freshly prepared and moist. When this is not the case the galvanism appears to be followed by more abdominal pain. In some cases of myoma, the bladder has unusual relations, and it may not be unnecessary to advise the operator to be certain of its exact position before using galvano-puncture in its vicinity.

The necessity for decided and somewhat prolonged rest after each *séance* cannot be too strongly insisted upon. The neglect of this will be found to be responsible for most of the accidents that may arise.

Some remarks may be necessary regarding failures. There appear to be some persons in whom electricity, when applied to the uterus, causes much nervous excitement, hysteria, and tendency to hæmorr-

hage, and this is irrespective of the form or method of its application In these cases it is impossible without anæsthesia to use the high dose with the positive pole, which alone has much hæmostatic power, and consequently, in the present state of our knowledge, it is probably wiser for the surgeon to abandon the use of electricity in such cases, rather than run the risk of letting the patient herself take the initiative.

By no means the least satisfactory feature of the clinical history of cases undergoing electrolysis for myoma or metritis with hypertrophy, is the remarkable way in which pain and sickness are sometimes relieved. I have known both of these symptoms, having existed for years unrelieved by all kinds of treatment, to suddenly disappear after the use of either the positive or negative pole to the interior of the uterus with a current of 200 milliampères as already described. The positive pole ("Anode") is considered the pain reliever, but it is with the negative pole that I have obtained the best results in sickness, and in some cases of dysmenorrhœa. Rebellious cases of the latter affection will sometimes be rapidly cured or relieved by this treatment. In my own hands the galvanic current, applied as I have stated, has been far more potent for the relief of sickness and pain than the simultaneous galvanization of the pneumogastrics, or the use of Faradism as recommended by Apostoli.

How these effects are produced it is impossible at present to accurately determine, but the curiously patent condition of the cervical canal which persists in many cases so long as negative applications are regularly made with a high current to the interior of the uterus, may perhaps explain the relief obtained in persistent reflex nausea and dysmenorrhœa. It is not improbable that similar treatment will be found of service in other cases of uterine dysmenorrhœa, besides those which are due to myoma.

But when this has been said we appear to have reached the essential limit of modern advance in the electrical treatment of diseases of women.

Knowing, as we do, the grave pathological changes in both ovary and fallopian tubes which are associated with so-called *perimetritis*, and which were first of all described and enforced by the French observers, Bernutz and Goupil, the use of Faradism in this disease appears to be idle, and the employment of galvano-puncture unscientific, and perhaps dangerous. But in making such criticism it must not be forgotten that those who have never had the opportunity of becoming personally acquainted with the accurate pathology of these affections, and with the good results of direct surgical treatment

in rebellious and dangerous cases, may well be pardoned for trying whatever remedies may appear to them likely to be of service. It is possible also that galvano-puncture by accidentally giving vent to some collection of serum or pus, may occasionally afford considerable relief.

In Faradism for the relief of pain, as advised and practised by Apostoli, I have failed to find at present much ground for imitation. The immediate effect produced is undoubted, but this is unfortunately transient and disappointing. As a stimulant in some cases of amenorrhœa in married women, Faradism has decided power, and this power appears to be increased by the use of the bi-polar sounds for intra-uterine and vaginal application.

But the whole subject of Faradism and galvanism with low currents as applied to gynæcology, has been treated by other writers, and notably by Dr. Mundé ("American Journal of Obstetrics," December, 1885), in a manner which corresponds with my own opinion and experience much more closely than does the advice and practice of Dr. Apostoli on these points. The latter has probably devoted more time and attention to this subject than any of his contemporaries, and it was only just to him and to his work to state first of all as clearly as possible his own teaching on the therapeutic value of both galvanism and Faradism in the diseases of women. It may be that such critical remarks as have been made are imperfect from the want of sufficient experience, but the conclusion to which such experience and contemporaneous literature points is undoubtedly this :—

That in electrolysis, by means of the galvanic current at the strength of 200 *milliampères and upwards, applied to the uterus in cases of myoma, chronic metritis, and endometritis, as advised by Apostoli, we possess a new method of treatment which is full of promise, and has already proved of considerable service; but that in other cases of gynæcological disease, the power of electricity (and especially of Faradism) has been over-estimated by him.*

IV.

Some other questions remain which demand special consideration : What relative value has this treatment of myoma and metritis as compared with more surgical methods? and what bearing should this have upon our advice and practice ?

The comparison to be made will of course eliminate from the discussion all absolutely quiescent myomata, or those which are undergoing the process of natural cure at the menopause ; also all the milder cases of metritis. When myoma is referred to, it will be understood to be either growing or bleeding, and calling for decided interference.

The recognized surgical means at our disposal may be thus divided: (1,) Supra-vaginal hysterectomy, for myoma; (2,) Removal of the appendages, for myoma; (3,) Dilatation, curetting, and cauterization, for metritis. The treatment by galvanism must be compared with each of these separately.

First, with supra-vaginal hysterectomy for myoma. This is still a very dangerous operation; and because of this, and also because it is practised for a disease which often spontaneously disappears at the menopause, serious objections to its use are felt both by surgeons and by the more intelligent laity.

The treatment by electrolysis (so-called) is comparatively safe. In many cases it appears to absolutely control the leading symptoms of hæmorrhage, pain and increasing size, and provided the diagnosis can be assured, there can be but little doubt that the treatment by galvanism should be unhesitatingly adopted rather than hysterectomy.

Secondly, with removal of the appendages for myoma. When this is not only practicable but easy, in the hands of an experienced surgeon the danger is but slight, the operation expeditious, and the cure almost certain. With galvanism the danger is also slight, but the method is tedious, and the cure cannot at present be considered so certain or complete.

Here the advantage evidently lies on the side of the operation, and I think there can be no doubt that if the patient be willing, and in the opinion of the experienced operator there is a fair chance of ease and success in its performance, the operation of the removal of the appendages should still be chosen as the best method of treatment. But it occasionally happens that complete removal of the appendages is impossible, or so dangerous that the surgeon who has commenced the operation with this in view, finds that he can only accomplish his purpose by hysterectomy.

Accordingly, it appears to me that our present knowledge points to the following as the best course of action in cases of growing or bleeding myoma :—

(*a*) To open the abdomen and absolutely verify the diagnosis.

(*b*) To remove the appendages, when this can be done completely and easily.

(*c*) When this would necessitate much manipulation and possible hysterectomy, to close the abdomen, and after recovery from the operation has occurred, to institute the treatment by galvanism according to Apostoli.

Finally, with regard to dilatation and the use of the curette and

cautery in metritis. When the uterus is large, flabby, and perhaps retroflexed like an empty pocket, its mucous membrane thick and spongy, and especially when there is any possibility of polypus or placental remains within its cavity, the treatment by dilatation and the curette will still be necessary, and should at once be chosen. But in cases short of this, too mild for an operation necessitating anæsthesia, and yet too severe to be cured by drugs and rest, galvanism as described affords a specially useful means of recovery, and will, I believe, become a recognized, satisfactory, and frequent method of treatment.

As I write, a notable paper by Dr. Keith, of Edinburgh, on "The old ways and the new of treating uterine fibroids," has just come to hand. ("Brit. Med. Journ." Dec. 10th, 1887). I find the opinions which I have expressed fully borne out by this, and specially recommend it to the notice of all who are interested in the subject.

EMPHYSEMA. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

In this disease there is obstruction to the circulation of the blood through the lungs, and diminished oxidation from destruction of proper lung tissue: the patient therefore has to live at a lower level of activity, and careful attention to hygienic and dietetic rules are necessary.

In the more or less frequently recurring attacks of asthma or bronchitis to which these patients are liable, the treatment must be that recommended under these heads (q. v.). **Arsenic**, **Strychnine**, and **Iron** are the most useful drugs in emphysema, and may be taken for long periods. To obtain the best results from the administration of arsenic the dose should be very gradually increased. **Iodide of Potassium** is serviceable in many cases. When the right ventricle begins to be overburdened from the excessive work thrown upon it, **Digitalis**, **Caffeine** and **Sparteine** ought to be given in combination with the other tonics from time to time. In the later stages, when general dropsy results from the cardiac failure, rest in bed, free purging, the administration of **Digitalis** with diuretics and diffusible stimulants, or the use of the Guy's pill of **Digitalis**, **Mercury** and **Squill** will often secure the patient a respite, and restore him to activity for a time when his chance of recovery seemed hopeless.

Of late years the use of pneumatic chambers and cabinets has been warmly advocated, but there is not sufficient evidence yet to speak positively as to their value. The mode of treatment, which consists in causing the patient to expire into a partially exhausted chamber, is the one from which perhaps the best results may be expected.

EPILEPSY. *Robert Jones, M.D.*

General Treatment (see Dictionary of New Treatment, "Medical Annual." 1887, pp. 154 and 265.

The most recent experimental researches into the pathology of epilepsy are by Victor Horsley. He first criticizes the classification, giving Dr. Hughlings Jackson's division into epilepsia gravior (from discharges in the bulb and pons), and epileptiform seizures (Jacksonian epilepsy); that of Dr. Russell Reynolds into epilepsia gravior, with or without loss of consciousness, epilepsia mitior with or without spasm. Dr. Gowers and Dr. Ross described generally, epilepsia gravior and mitior as functional, epileptiform seizures, as organic; and that hystero epilepsy, eclampsia, and laryngismus stridulus were by them considered something apart from epilepsy. From experimental researches Mr. Horsley concludes that epilepsy originates from nerve discharges in the motor cortex as well as in the bulbo-spinal centres; he refuses to accept Nothnagel's hypothesis of a special convulsive centre in the bulb and pons. Epilepsy induced from the cortex was characterized by tonic spasm, followed by clonic; that from the bulbo-spinal centres, simply tonic, the sequence of clonic upon tonic being wanting. Hystero-epilepsy was probably a cortical disease, as epileptiform seizures dependent on organic lesions undoubtedly were. The tonic spasms resulting from cortical stimulation were a tetanus compounded of a series of muscular contractions. There seemed in his experiments nothing to necessitate a special convulsive co-ordinating centre; co-ordination being effected by the functional and structural union of all bulbo-spinal centres. He considers the general characters of an epileptic fit to be a period of latency, then tonic spasm, then clonic spasm, preceded by arrest of respiration, with cyanosis and salivation, though the precise relationship of these phenomena to one another could not be determined. All these could be effected by **Absinthe** and **Alcohol** injected into the venous circulation; by coarse disease, such as septic meningitis; traumatisms; and new growths; also electricity used experimentally, thus exciting cortical stimulation. Summing up, Mr. Horsley emphatically concluded, that convulsions due to cortical discharges are evoked in various groups of muscles by nerve energy, proceeding from that centre in each hemisphere which is in relation to each group of muscles; and that in generalized epileptic convulsions both cerebral hemispheres are involved.

So nearly related to epilepsy are tetany, laryngismus stridulus, and infantile convulsions, that the treatment may be referred under this heading. Dr. Cheadle recommends a three-fold course. (1,) To

relieve convulsive seizures when they arise by removing all excessive clothing or any restraining garment, raise the head and keep the body in the supine position to allow fresh air and warmth. (2,) To ward off attacks by the administration of **Bromide** and **Chloral** given together in full doses at regular intervals of sufficient frequency, until the tendency to spasm permanently declines. For a child of six months, ½ gr. **Chloral** with gr. i. to ij. of **Bromide** every four hours; for one a year old, **Chloral** gr. i. to iij., and **Bromide** gr. v. every four or six hours, and so in proportion. Children bear chloral well. **Calabar Bean** $\frac{1}{12}$ gr. to ⅓ gr. may be given if the above fail, but it is more advisable to increase the chloral and bromide. (3,) Treat the constitutional predisposition, rickets, the prime source of all mischief; for this purpose give milk, cream, raw meat, entire wheat flour, and the best kinds of infants' food; later, **Cod Liver Oil**, and **Syrup of Lacto-Phosphate of Lime**, or **Lime and Iron**. Give a free and liberal diet.

Baginsky recommends warm baths and **Chloral Hydrate Enemata** followed by the wet pack. Two opinions are given by him as to the pathology, viz., organic lesion of central nervous system, or peripheral irritation. His cases were under four months, and dentition may therefore be excluded. Children do not die from tetany so often as from intercurrent diseases, dyspepsia, etc. The worst cases occur in the summer months.

Dr. Dana has recently contributed towards the treatment of epilepsy, and recommends primarily dietetic and hygienic measures, following which are medicinal remedies, and of these the bromides take the chief rank in the treatment of epilepsy. All bromides act alike in this disease. If one does not cure, another will not. Occasionally changing and mixing reduces the attacks for a time, and agrees best with digestion.

The best bromides are those of **Potassium**, **Sodium**, **Ammonium**, and **Hydrogen** (hydrobromic acid); possibly we may add **Nickel**. **Bromide of Potassium** is the most trustworthy. **Bromide of Sodium** is more agreeable to the taste, less irritating to the stomach, and milder in its effects, but is eventually just as depressing as other forms. **Bromide of Ammonium** has a brief stimulant effect on the circulation. **Hydrobromic Acid** is useful in those cases in which there are indigestion and phosphaturia, and an alkali is contra-indicated. It produces acne less readily than the alkaline bromides.

Bromides should be given in daily doses of ʒj, increased gradually until the attacks are suppressed, or the dose reaches ʒiv to ʒj daily. Few patients can tolerate more than this latter dose. Thorough

bromidization should be always tried if necessary to stop the fits, and it may be occasionally repeated. But bromidization is sometimes injurious, even making the disease worse, and it must always be employed with caution.

When the fits are suppressed, the bromides should be carefully reduced, but never entirely stopped for at least two years after the last fit.

In most cases, and especially in nocturnal epilepsy, an extra large dose of bromide should be given at night.

It is very important that bromides should be chemically pure, that their use should be continued a very long time, and that their depressing effects should be neutralized.

The best non-specific adjuvants (drugs) to the bromides are **Potassium Iodide** (in syphilitic epilepsy), **Potassium Bicarbonate** (in lithæmic and rheumatic states), **Carbonate of Ammonium**, the hypophosphites, **Arsenic, Iron, and Quinine.**

The other chief adjuvants to the bromides are diet, exercise, a regular life, hydrotherapy, counter-irritation on the neck, and, in the line of drugs, **Zinc, Belladonna, Strychnine, Valerian**, and the **Nitrites.** Combinations of bromides with the other drugs mentioned will lessen attacks when bromides alone will not. Other drugs which sometimes help the bromides are **Digitalis, Cannabis Indica, Ergot, Conium, Chloral**, the **Salts of Copper, Picrotoxin**, and **Borax.** None of these do any permanent good alone, and their value as adjuvants is not uniform or generally conceded. The best substitutes for the bromides when these do no good, or do harm, are **Belladonna, Zinc, Strychnine, Glonoin, Borax**, and alteratives.

Bromides stop the fits in from five to ten per cent. of cases, oftener if given early in the disease, if given to young children, and if given in cases that develop after twenty-one. Bromides lessen the fits in from eighty to eighty-five per cent. of cases. Bromides do no good, or do actual harm, as regards frequency of attacks, in from five to ten per cent. of cases. Bromides do no actual good to the patient in a much larger proportion of cases.

To prevent bromide acne, **Arsenic, Calcium Sulphide**, baths, and diuretics are the best measures, or **Hydrobromic Acid** may be used. To prevent bromidization, adopt all possible roborant measures : use salt-water baths and regular physical exercise, give **Black Coffee, Caffeine, Cocaine, Mineral Acids, Strychnine, Bitter Tonics, Cod-Liver Oil**, or give large doses of the **Bromides** every three days only. In all cases dilute the bromide preferably with **Carbolic-Acid**

Water or **Vichy** in the proportion of six ounces of water to a scruple of the drug. The continuous administration of an **Alkaline Bromide** in an **Alkaline Water** sometimes affects the bladder, and then the bromide can be given dissolved in **Hydrobromic Acid.**

The remedies that are especially useful in *petit mal* are, after the bromides, **Belladonna, Glonoin,** (?), **Cannabis Indica** (?), **Cod-Liver Oil, Ergot** (?), counter-irritation at the back of the neck, and cold spinal douches.

For epilepsy in children, besides the bromides it is advisable to employ a milk diet, rest, and **Oxide of Zinc. Belladonna,** if tried, should be given cautiously.

For adults and chronic cases, use the bromides, **Belladonna, Iodide of Potassium,** and **Ammoniated Sulphate of Copper.** Oxide of zinc is here of less value.

For nocturnal epilepsy, increase the dose of bromide at night, and add **Chloral** or **Digitalis.** Give also, if needed, **Strychnine.** Raising the head of the bed or making the patient sleep in a chair at night are measures to be tried.

For hysterical and erythritic cases, with or in place of bromides give a diet of milk and vegetables. Try **Turpentine, Valerian,** or **Zinc.** Belladonna is usually contra-indicated.

Counter-irritation by means of blisters, issues, and setons at the back of the neck, is a useful adjunct to treatment, especially in *petit mal* and in cases with mental derangement.

For the status epilepticus, give large enemata of **Chloral,** and use emetics and purges. Venesection is often efficacious, morphine is dangerous, chloroform is only palliative, and nitrite of amyl is of little value.

To prevent impending attacks, the best remedy is **Nitrite of Amyl,** which may be carried in a phial filled with cotton. Inhalation of **Chloroform** or **Ammonia,** the internal administration of **Ammonia, Spirits of Lavender,** or **Alcohol,** a sternutatory, and pressure on the carotids—all are measures which sometimes stop the attack.

Alterative and habit-breaking drugs, such as **Mercury, Iodide of Potassium, Arsenic, Antimony,** are useful in epilepsy. ("New York Medical Journal," April 24, 1886, p. 454).

Another remedy is:

℞ Ext. Fab. Physostigm. grs. viiss | Aq. Amygd. Amar
Spt. Æther ℥iss | (sive Aq. Menth. pip.) ℥vss

Mix. ♏ v. to viii. for children three times daily; for adults, twice the dose.

ERYSIPELAS. *N. Whitelaw Bourns, M.D.*

Sir Dyce Duckworth recommends the local application of an ointment, of prepared or precipitated chalk, in purified or benzoated lard. Melt the lard, mix in an equal quantity of chalk, with half a drachm of pure **Carbolic Acid** to each ounce of ointment. To be smeared thickly over the affected part, and covered with **Boracic** lint. The application must be changed twice in the twenty-four hours in severe cases. (The "Practitioner," Jan. 1887.)

In the "Glasgow Med. Jour.," May 1887, p. 342, Mr. Pollock states that in localised erysipelas affecting the throat, ear, and pharynx, nothing is so good as small doses of **Aconite** frequently repeated, a method of treatment recommended by Ringer. In simple cutaneous erysipelas nothing is so effectual as 20 to 30 minims of **Tinct. Ferri. Mur.**, given every two hours. As a protective to the skin the following paint is recommended :—

Gutta Percha	℥ij	Dissolve & add Zinci Oleat	℥ij
Chlorof. Meth.	℥ij	Iodoform	℥ss

The affected part to be painted over with this preparation.

When the disease spreads rapidly, the patient must be well dosed with **Ammonia, Bark, Quinine**, and, if in much pain, 1 grain of solid **Opium** should be given at bedtime. If simple bullæ or vesicles form, they should be evacuated, and the surface dressed with **Tartrate of Potash** and **Iron Lotion** in the strength of 10 grains to the ounce of water. When sloughing and suppuration take place, free incisions should be made, and an antiseptic solution applied ; the parts must then be thoroughly dried and dressed with sublimated wood-wool. The best antiseptic lotion is one of **Bichloride of Mercury**, strength 1 in 2,000.

Nussbaum on the treatment of erysipelas, says : "Only since Hueter's discovery of the presence of cocci in erysipelas, of which they must be considered the cause, the treatment of this direful disease became more hopeful."

The reducing properties of ichthyol, which manifest themselves by diminishing the state of irritability and the excessive nutrition of the tissues, attracted Nussbaum's attention. He protected the wound as soon as erysipelas appeared with compresses of **Iodoform** gauze, and spread over the whole extent of the erysipelas, an ointment of equal parts of **Ichthyol** and **Vaseline**, which he covered with a 10 per cent. **Salicyl.** lint and gauze bandage. On the following day the erysipelas was found stationary, the glassy red skin had lost its turgidity, and shrivelled into folds, the pains had given way to a feeling

of numbness, the symptoms of irritation had disappeared, and did not return, although the ointment had only been used for three successive days.

From the surprisingly favourable results of ichthyol in these cases, Nussbaum entertains hopes of having at last obtained a reliable remedy in erysipelas. (The "Medical Press and Circular," January 26, 1887).

ERYTHEMA.

N. Whitelaw Bourns, M.D.

Under this head several skin affections are sometimes included as roscola, strophulus, pityriasis, urticaria, erythema simplex, E. multiforme, E. nodosum, and E. pernio, but at present we shall only refer to the four varieties of erythema.

Erythema simplex is a trivial ailment requiring little treatment beyond a soothing application and a saline aperient.

Erythema Multiforme. Villemin, from the study of several cases, states that the affection is a general disease of a specific nature, and that the cutaneous phenomena, as well as the usual accompanying pains and swelling in and about the joints, are merely symptomatic—the joint symptoms being in no way related to rheumatism, as generally supposed. And, in the matter of treatment, that the **Potassium Iodide**, in a quantity of about 30 grains daily, has a specific action, exercising a surprising influence on the disease in the course of twenty-four to forty-eight hours. ("Bulletin de l'Academie de Médicine," 1886, No. 20).

Erythema Nodosum.—According to Duhring "no active treatment is called for, as the complaint ends in spontaneous recovery." The patient to be kept in bed, the bowels acted upon: with **Quinine** internally, and externally hot fomentations or cold applications. (Duhring, "Dis. of Skin).

Erythema Pernio.—Dr. Wallace says broken chilblains invariably disappear in a short time by "dabbing on them a good lump of ordinary made mustard" and rubbing it in every night before the fire until dry. When the ulcer is sluggish, McCall Anderson uses equal parts of **Spirits of Turpentine** and **Resinous Ointment.**

Treatment of the Erythematous Condition of the Hands which precedes Chilblain.—As soon as the weather becomes cold Besnier says the sufferers from this malady employ the following plan of treatment ("Jour. de méd. et. de chir.," Sept., 1886, p. 396): The feet or hands are to be bathed with a decoction of **Walnut Leaves** and then dried, and **Spirits of Camphor** applied. Then the parts are to be covered with a powder of 90 parts of **Starch** and 10 parts of **Salicylate of Bismuth.**

If there are much discomfort and pain, before applying this powder the hands are to be bathed with a lotion of

Glycerin Aquæ Rosæ	āā 50·00 parts	Tannin M.	·10 parts

EYE—(New Remedies applied in Diseases of). *Wm. Lang, F.R.C.S.*

Antipyrin. In all cases of headache or ciliary pain accompanying such diseases of the eye as keratitis, corneal ulcers, glaucoma, headache after cataract, extraction, etc., Kazaurow obtained good results with **Antipyrin.** In fourteen cases a single dose of 1 grain was sufficient, but in a few cases of optic neuritis and scleratitis the dose had to be repeated three times before relief was obtained. Kazaurow prefers this remedy to salicylate of sodium, as it does not produce any unpleasant general symptoms. ("Wratsch.," No. 7).

Ergot. Dehenne recommends the subcutaneous injection of ergot in diabetes, especially before the extraction of cataract in such cases.

In two cases of albuminuria this treatment resulted in considerable improvement.

Lanolin. In Landesberg's opinion lanolin is the best basis for eye ointments, as it does not irritate the eye, and is rapidly absorbed.

Atropine. The use of mydriatics for diagnostic and therapeutic purposes is a very important subject which is well treated in a paper by E. Jackson, of Philadelphia. The chief contra-indications of their use is incipient glaucoma, and although the author makes a "possible exception" in favour of cocaine, it should be remembered that several cases are already on record in which an outbreak of glaucoma was apparently induced by the use of cocaine, and there is good reason to believe that while the action of this drug upon the vessels tends to lower the tension of the eye, its action upon the position of the iris may under predisposing conditions tend to induce glaucoma, just as in the case of other mydriatics.

Other contra-indications are the presence of a perforating ulcer at or near the margin of the cornea, and the interference with vision which a mydriatic causes. A single drop of either of the following solutions is sufficient simply to dilate the normal pupil for ophthalmoscopic examination :—

Cocaine Hydrochlorate	1 to 25	Atropine Sulphate	1 to 25,000
Homatropine Hydrobromate	1 to 500	Duboisine Sulphate	1 to 5,000

Or Daturine, Hyoscyamine, or Hyoscine Salts of the same strength as Duboisine.

For the purposes of refraction the present writer agrees with the author that homatropine is to be preferred, only instead of employing

it in a watery solution he uses a single drop of the following mixture which never fails to completely paralyze the accommodation :—

Homatropine (pure)	2 parts	Castor Oil	100 parts
Cocaine (pure)	2 parts		

The salts of these drugs do not dissolve in the oil.

A small drop of this mixture is dropped into the lower cul-de-sac from off a probe, and the lids then closed for fifteen or twenty minutes, when the pupils will be fully dilated and the accommodation nearly paralyzed; the maximum paralytic effect is reached about the fortieth minute. At the end of the examination 1 drop of a 1 per cent. solution of **Eserine** in **Castor Oil** must be placed in the eye, with the result of completely neutralizing the mydriatic in from five minutes to a few hours.

To dilate the pupil and break down adhesions in iritis, it is necessary to obtain the maximum effect with the minimum quantity of the drug, so as to avoid poisoning the general system. This can best be done by using an **Atropine** and **Cocaine** ointment :—

Atropine (pure)	1 part	Vaseline or Lanolin	100 parts
Cocaine (pure)	2 parts		

A piece of this ointment is placed on the inside of the lower lid every three hours for two days till the pupil is fully developed.

The advantage of this ointment is that it remains in contact with, and produces the maximum effect on the eye: whereas the drops, so usually ordered, flow down the nasal duct, and produce the maximum effect on the throat and general system.

Iodol. M. Abadie, refers to the revolution in the treatment of certain diseases, formerly considered to be constitutional, and accordingly treated with tonics, etc., but which are now known to be due to micro-organisms, and are therefore cured by local remedies and applications. He instances lupus, which, whether of the face, conjunctiva, or lachrymal sac, must be scraped away or burnt with the galvano cautery. He strongly recommends an ointment of **Iodoform** and **Lanolin** in cases hitherto found rebellious to treatment, such as tuberculosis of the iris and diseases of the choroid. (See also "Hyocine Hydrobromate," p. 64; "Scopoline," p. 91; "Stenocarpine," p. 99).

EYE-BALL—(Excision of.) *Wm. Lang, F.R.C.S.*

How to deal with a lost eye is still an undecided point with some surgeons. Dr. Bell Taylor, of Nottingham, is in favour of the resection of the optic and ciliary nerves, as a substitute for excision, in

those cases where the eye, although sightless, is still ornamental, but is affected by neuralgia, attacks of recurrent inflammation or luminous spectra, etc. In other cases, where there is a tumour or foreign body in the globe, or where the eye is a disfigurement, he excises.

Dr. Mules, of Manchester, eviscerates all eyes except those in which there is a malignant growth and replaces the contents by a hollow glass globe or artificial vitreous, which is retained permanently. This method has been followed by sympathetic inflammation in a few cases operated on by Mr. Cross, of Bristol.

The present writer has introduced another method, viz., to excise the globe in the ordinary manner and then secure a metal, glass, or celluloid globe within Tenon's capsule. Both Mules' and the writer's methods are intended to secure a better support for the artificial eye.

The writer's method is first to irrigate the conjunctival sac with a **Boracic Acid** or **Perchloride of Mercury** solution, then to excise the eye. Tenon's capsule is next irrigated with iced lotion till most of the bleeding stops; this brings the capsule prominently into view. The artificial globe should be about two-thirds the size of the excised eye, it is placed in the capsule and secured there by three silk sutures which unite the capsule in a horizontal direction; the middle suture is put in close to the cut ends of the superior and inferior recti and then two lateral ones, one on either side at a corresponding depth; these deep sutures are not removed, the conjunctiva being united over them by three superficial sutures. A horse-hair drain is inserted under the deep sutures and is removed on the third or fourth day. The conjunctival sac is again washed out and the lids closed by an iced pad.

EYE-LIDS AND LACHRYMAL GLANDS (Diseases of).

Wm. Lang, F.R.C.S.

Where closure of the lids is required for a longer or shorter period, Dr. Argyll Robertson has devised the following operation, which he calls central Blepharoraphy. The lower lid being grasped with a pair of stout forceps held parallel to its edge, the conjunctiva is dissected off the free margin for five or six millimeters along the centre of the lid. The roots of the lashes must not be damaged. The upper lid is similarly treated, and the two united by horse-hair sutures—union will be completed in four days.

Dr. Argyll Robertson has employed the operation in cases where, after enucleation of the globe, an artificial eye is not or cannot be worn, and where, as a consequence, the lids fall in and produce great

irritation of the conjunctival sac; also in cases of spasmodic entropium.

The advantage of the operation is that the lids can be readily separated when required. The employment of the operation might be extended to closing the lids in cases of proptosis or where they gape, as after burns or facial palsy; or to cover an eye which produces diplopia, caused by an incurable ocular palsy.

Where, however, the closure is required for two or three weeks only, it is not necessary to raw the edges of the lids, as horse-hair sutures do not cut through if placed sufficiently deep.

Chalazion.—After injecting a two per cent. solution of **Cocaine** into the tumour, the lid is everted, an incision made into the cyst along its whole length, the contents squeezed out, and according to M. Dehenne the inner surface of the sac cauterized by a galvano-cautery. The same author attributes the occurrence of these cysts to a blepharitis, which blocks the orifices of the meibomian glands; he prescribes a lotion of **Zinc Sulphate**, 2 parts, **Boric Acid**, 2 parts, to 1,000 parts of distilled water; and if the lids are inflamed a **Boric Acid** ointment, 1 part in 1,000 of **Vaseline**; or where there is no inflammation an ointment of yellow precipitate, one part in 300 of **Vaseline**.

Styes.—M. Abadie recommends a lotion of **Boric Acid**, 1 part in 30 of water, as a cure for styes. Some of the lotion is to be dropped on the styes several times a day.

The writer has found that **Calcium Sulphide** in half grain doses, four times a day, effectually arrests the formation of a stye in some cases. In every case it is well to look for and correct an error of refraction, which usually exists in these patients.

Lachrymal Apparatus.—Epiphora, unaccompanied by a mucocele, is best treated by weak astringent lotions, without operative interference, any error of refraction being also corrected by appropriate glasses.

When a mucocele complicates the case, a canaliculus must be slit, the stricture, if membranous, divided, and the cure completed by the use of probes. This treatment, however, in a large percentage of cases does not cure the mucocele; Mr. Edgar Browne, therefore, recommends the prolonged irrigation of the lachrymal canal, with an antiseptic lotion, whenever the discharge is purulent or muco-purulent.

After dividing the canaliculus, and treating the stricture with probes, he passes a cannula probe or a small sized gum-elastic urethral catheter, connected by means of a piece of rubber tubing with an

elevated reservoir, containing a pint or more of either a 0·5 per cent. solution of **Trichlorphenol** (magnesium salt), or a solution of **Biniodide of Mercury.**

When the orifice of the cannula is in the nares the fluid is allowed to run ; by withdrawing the cannula very slowly and exercising considerable patience, every portion of the duct may be effectually irrigated. In chronic blenorrhœa it is well to dislodge any thick tenacious mucus by a previous irrigation with an **Alkaline** solution, otherwise the antiseptic lotion will not come in contact with the mucous membrane, and the result will be a failure.

After three or four such irrigations the discharge either ceases or becomes aseptic, and the case gives no further trouble.

Granular Lids.—The evacuation of trachoma by pressure has been systematically practised by Dr. Hotz for the last five years. The method consists in everting the upper lid, and supporting it with one fore finger, whilst the distended follicles are squeezed between the finger nails till all the contents has escaped. For the lower lid the compression is best made with forceps. The writer has recently been carrying out this treatment in certain cases with gratifying results. His plan is to select a case where the trachoma are very large and numerous, he then compresses the lid with a flat pair of Demarre's forceps, the blade usually placed beneath the lid being in this instance in contact with the skin. The lid is now everted, and **Cocaine** in powder dusted on the conjunctival surface ; with a small Volkmann's spoon, the whole of the granular area is carefully scraped until every trachoma is removed. The forceps being shifted, if necessary, in order to expose any trachoma which may have been covered by the compressing blade. The lid is now washed with a 1 in 2,000 solution of **Perchloride of Mercury** and an iced pad applied.

The pain is severe, whichever plan is adopted, but the bleeding with the writer's method is quite under control, and the whole of the palpebral conjunctiva is readily exposed. The re-action is slight. The results have not been sufficiently long under observation to enable the writer to judge of the permanence of the cure.

After the trachoma have been squeezed out Dr. Wicherkiewicz drys the lids, dusts on a powder composed of 1 part of **Tannin** and 3 parts of **Boric Acid.** He repeats the treatment till the cure is complete, that is, in from one to four weeks ; where there is severe trachoma with thick pannus, he uses the galvano-cautery to the latter before applying the boro-tannic powder. In cases of scrofulous inflammation of the lids and cornea, he has found the powder to answer well.

FAVUS (See "Tinea Favosa").

FEBRICULA. *Alexander Collie, M.D.*

It is common to regard this disease as of no consequence. The writer thinks it serious from two points of view: That of the person affected and the persons liable to be infected. As regards the person affected it should be borne in mind that a febricula is really a disease of whose nature we are ignorant, by reason of its mildness, and that sequelæ do not always follow severity, but sometimes mildness of attack. Scarlet fever is sometimes so mild that it is diagnosed by the nephritis, and enteric fever by sudden death from perforation. It will be obvious that to permit an enteric fever patient "to go about" merely because his temperature, as measured by the thermometer, is not high, and because there are no "urgent" symptoms, would be a dangerous proceeding. It will be equally obvious that to permit a scarlet fever patient "to go about" say in wintry weather, until the nephritic stage be passed, would be equally dangerous; for perforation in the one case and nephritis in the other have no necessary connection with general severity. As regards the community the subject of a "febricula" may be and often is a danger. The febricula may be a mild form of smallpox, of scarlet fever, or of some other infectious disease, and unless this possibility be borne in mind and he be isolated, by reason of his "going to and fro upon the earth," he becomes a source of incalculable mischief. It is by these mild cases, which nobody thinks anything of, that disease is mainly spread, and the writer thinks that many outbreaks of infectious disease, which have been attributed to other causes, have been due to this cause. It is so frequently asserted without the ghost of a suspicion of the huge "petitio principii" involved that there was not a case in the district. Yes, no doubt, *so far as was known*, but no farther. It is assumed first that every case which occurs can be recognized for what it is, and second that every case which does arise is recognized. Therefore a "febricula," should be looked upon with great suspicion, and treated with the utmost care until it be quite clear what be the meaning of the "febricula," and in forming a judgment the writer would add one caution: do not estimate "severity" by the degree of bodily heat, as measured by the thermometer: the temperature of the disease is one thing, the disease itself another.

FEVERS. *Alexander Collie, M.D.*

In the general treatment of the diseases commonly called "fevers," it is of the first importance to remember that they have a natural history. There is no "drug" which can essentially modify

the course of the disease, although there are several which have more or less influence upon the temperature. "Various drugs" have been proposed, but the conclusions formed about them have been usually the consequence of assumed premises or illogical inferences. A not uncommon mode of reasoning is as follows:—A. treated so many cases with this, that, or the other "drug;" they all recovered, therefore they recovered because of the drug. It is assumed that without the drug the cases would have died, an assumption for which there cannot be any evidence; it is inferred that every future group of cases shall essentially resemble A's, another assumption for which there is also no evidence. All that is warranted by the result is that the particular drug in the dose given is not a poison. It is forgotten that individual cases and epidemics vary indefinitely. To take an instance in point; during fifteen years the mortality of scarlet fever in the Eastern Hospitals has averaged about 13 % yearly, but during the three months, August, September, and October, of the present year, of 675 admissions the mortality was 4·4 per cent, although the treatment has not varied.

The general treatment of "fevers" consists in isolation, thorough ventilation, time, rest, nursing, feeding, and scrupulous cleanliness. The temperature of the room should, as a rule, (influenza and measles excepted) during the acute stage be about 50° F; but towards convalescence should be higher. The patient should never be left alone during the acute stage, even when he appears to be quite rational. Instruments by means of which he might injure himself should be placed beyond his reach. Physic generally, and in particular purgatives, should be avoided. What the patient requires is food and drink. The former should consist of milk, beef tea, chicken broth, raw eggs, and bread steeped in the beef tea, and if he take a "sufficiency" of these he will not, as a rule, require alcohol, unless it shall have formed part of his dietary in health. Only a very rough guess can be made of a "sufficiency" for general use, but if an adult during the acute stage of "fever" take two pints of milk, one pint of beef tea, two eggs, and eight ounces of bread, he will probably in most cases have taken a "sufficiency," but providing that he be digesting his food he should be allowed more if he wish it, although more should not be forced upon him. It should never be forgotten that food undigested is injurious.

If, however, the patient do not take a sufficiency of food he should be supplied with more or less of alcohol. The form of the alcohol should be that to which he was accustomed in health, but if it were

not his habit in health, burgundy and champagne are the best. Certain weakly children, however, do best on a liberal allowance of port. As regards quantity, this must vary widely, but 8 ounces of port or 24 ounces of burgundy or 24 ounces of champagne during the twenty-four hours in the case of an adult will rarely require to be exceeded. The patient should be kept as quiet as possible, so that any natural tendency to sleep may not be disturbed, and as a rule he should not be woke up to be fed. To procure sleep nothing is safer than some form of alcohol, and for this particular purpose whisky and water is perhaps in most cases the best. In some cases the application of cold water is useful, and whenever it is possible the writer prefers it in the form of the plunge bath, into which, when decency permits, the patient should be placed without any covering. The temperature of the water must vary according to all the circumstances, but generally the writer prefers about 70° Far. in the case of young adults; at the two extremes of life it should be much higher. The duration of the bath must vary, but it will be rarely necessary to exceed ten minutes, and generally it will be safer to keep within this limit. It has to be observed further that it is in the milder cases, in the earlier stages, and in the main to young adults, that the cold bath is applicable; to the severer cases, in the later stages and at the extremes of life, the cold bath is, in the writer's judgment, of very limited application. It is most useful in scarlet fever and enteric fever. It is wholly mischievous in typhus, and it is of doubtful value in the other infectious fevers. It is contraindicated in adynamic cases, when the fever is complicated with inflammation of the heart, lungs, kidneys, peritoneum, etc., in hæmorrhage from the bowel, where perforation is suspected, in measles, in influenza, and where there is great fear of it. It should, however, be borne well in mind that the employment of the cold bath should not be determined on by the thermometer alone, but by a consideration of all the factors, the fever being but one; because patients are not always very ill when their temperatures are high, nor very well when they are low. If the cold bath be inapplicable, **Quinine**, **Antifebrin**, or **Antipyrin** may be given.

Delirium is usually easily managed with tact on the part of the nurse, and the principle of treatment is that the patient should not be contradicted. If he will insist upon putting on his clothes and walking about his room or sitting by the fire, he should be allowed to do so. If not opposed he usually returns quietly to bed. Irritating applications, such as mustard and hot poultices, should as a rule be

avoided, because sloughing of the skin is an occasional result, and the patient is usually hot enough without such. Bed sores should be avoided by frequent movement, and when the skin is reddening a spirit lotion should be used, and a water bed supplied. Convulsions should be treated by placing the patient so that he may not injure himself. Generally it is useful to recommend some disinfectant, and Condy's is a good one.

During the year two important communications on the subject of fever have been made, the one by Dr. Maclagan, the other by Dr. MacAlister. The former has kindly favoured me with a brief abstract of his views. He says, "First, I must disclaim all idea of advocating one theory of fever to the exclusion of all others. I believe in the neurotic theory of fever, and I believe in the combustion theory; but I would confine each to a separate sphere. The neurotic theory is applicable to all cases of hyperpyrexia, it, and it only, serves to explain the rise of temperature noted in cerebral hæmorrhage in lesions of the cord, and all non-inflammatory lesions of the nervous centres. My theory is specially applicable to the specific fevers, and all febrile ailments in which the poison is believed to be an organism. The poisons of such diseases are reproduced in the system during the course of the maladies to which they give rise: this reproduction is the cause not only of the malady, but of the individual phenomena which go to constitute it. The action of an organism on its environments consists in the consumption of nitrogen and water. The environment of the poisons of the specific fevers is the blood and tissues of the body. Their action must, therefore, consist in the consumption of the nitrogen and waste of these tissues. The essential phenomena of the febrile state are—

(1,) Wasting of the nitrogenous tissues.
(2,) Increased consumption of water.
(3,) Increased elimination of urea.
(4,) Increased rapidity of the circulation.
(5,) Præternatural heat.

The wasting of the nitrogenous tissues is mainly due to the consumption by the contagium of nitrogen destined for their nutrition and repair. But the contagium also largely consumes water, which constitutes a great part of the bulk of the nitrogenous tissues; and the appropriation of this by the contagium must lead to serious loss of bulk in them. But it has other results, for the consumption by the contagium of the water destined for the various tissues and organs of the body serves to explain the thirst, the dry skin, the scanty urine, and the constipa-

tion which are noted during the continuance of the fever. This increased consumption of nitrogen and water would necessarily give rise to increased rapidity of the circulation, and greater activity of the ordinary metabolic changes in the tissues. Hence would arise increased frequency of pulse, and increased elimination of urea. Another necessary result of such increased metabolism would be increased production of heat. Rise of temperature thus becomes only one of a group of phenomena, each of which is the direct or indirect result of the propagation of the contagium in the tissues. The direct action of the contagium consists in the consumption by it of the nitrogen and water destined for the nutrition of the tissues. The results of this action are—(1,) Impoverishment and consequent wasting of the nitrogenous tissues ; (2,) Increased demand for water with its attendant thirst, dry skin, scanty urine, and constipated bowels ; (3,) Increased tissue metabolism with its attendant increased rapidity of the circulation, increased formation of urea, and increased production of heat. The nervous symptoms result from malnutrition of the brain, brought about in the same way as the malnutrition and consequent wasting of the muscles."

Dr. MacAlister, although he admits the existence of fever without a rise of temperature, practically considers the "disorder of the body heat the essential condition of fever," and from this point of view examines the problems under the heads of—(1,) Heat loss ; (2,) Heat production ; and (3,) The thermotaxic nervous mechanism. Under the first heading he considers the "retention theory" of Traube (the theory that spasm of the arterioles of the skin, caused by some disorder of the sensitive nerve centres, hinders the normal escape of body heat, and thus causes a general rise of temperature) and rejecting it, agrees with the conclusions, founded on experiments of Liebermeister, Leyden, and Senator, and others, that in pyrexia the amount of heat discharged is increased, and not diminished. Besides, in fever there is no continuous spasm of the arterioles, the cutaneous blood supply fluctuating in an irregular manner. There is really no retention, but on the contrary, increased heat-loss and increased heat-production; the last, in pyrexia, more than making up for the first. The heat-production fluctuates, as also does the heat-loss, the two factors are fairly independent of each other, and the result is the unstable temperature characteristic of fever.

Liebermeister's idea of the temperature being set, as it were a peg higher (not at 98°4, but at 101°, 102°, 103°, etc.) is misleading, the normal temperature chart, say of a bird, showing none of the variations

so characteristic of pyrexia. Whence comes the heat? is the next point. "The warmth, the carbonic acid, the urea of health, are evidence of so much food fuel usefully transformed; the excessive heat and the excessive waste products of fever are evidence that the fabric itself is being wastefully consumed." The heat comes from the tissues at large, but "the muscles are the thermogenic tissues *par excellence*." A muscle stimulated contracts, motion and heat resulting; but a muscle can produce heat without contraction. May not, then, contraction occur without heat? Impressed with the idea that this is possible, our author, working under Professor Ludvig, in 1881, introduced very sensitive thermometers, with fine-drawn bulbs, into the intermuscular cleft of the frog's thigh, and found that the heat producing power was sooner exhausted than the work producing power of the muscles. The same holds in warm-blooded animals, and he found that by cooling down the animal experimented on, the production of heat was abolished or notably depressed, whilst the motor functions were almost intact. Drs. M. Smith and Lukjanow, carrying on these researches, came to the not unexpected conclusion that on stimulating a muscle through its nerves, two processes result, one an explosive, manifested by change of form and the performance of mechanical work; the other more continuous, and manifested by the increased developement of heat. So much for facts, now for theory.

In a muscle you must evidently have two stuffs, a "contractile stuff" and a "heat stuff," or "thermogenic stuff." Both are affected by cold, but the thermogenic sooner than the contractile. The two "stuffs" are being continually decomposed and recomposed by the blood. The muscle substance is being incessantly built up and pulled down; the up-building process may be called anabolic, and the unbuilding process catabolic. In the heart we have an example of this. The sympathetic nerves give the heart increased activity, followed by exhaustion, and would, therefore, probably be catabolic, while the action of the vagus giving diminished activity, followed by repair of function, would probably be anabolic.

Dr. Gaskell is now at work on the thermal changes accompanying inhibition, and Dr. MacAlister "would not be surprised to hear (as a result of Gaskell's inquiries) that, as on stimulating a motor nerve we have a simultaneous evolution of heat, so, on stimulating the inhibitory nerve, the muscle becomes cooler."

We may have then two distinct sets of nerve fibres, whose paths are probably anatomically different. "The one set are essentially catabolic; they set up disintegrative changes in the muscle which are manifested

first by thermogenesis, and secondly by contraction. The other set are essentially anabolic; they set up reconstructive changes in the muscle, which are manifested by inhibition of motion on the one hand, and the absorption of energy on the other."

The next point is the relation of this nervous mechanism to the central nervous system and "the thermotaxic mechanism." Here we meet with difficulties; "little or nothing is known as yet of the anatomical course of the thermal nerves." Still it would appear that "there is experimental evidence that the tract containing the nerve fibres inhibitory of the thermogenic function of the muscles runs through the medulla into the pons; there is, moreover, experimental evidence that in the dog, at least, a cortical or subcortical region, coinciding in part with the motor region, is concerned with thermogenesis, and is probably in connection with the inhibitory tract."

Again, a fine needle passed into a rabbit's brain "vertically through the medial side of the *corpus striatum* near the *nodus cursorius* of Nothnagel," gives a rise of temperature in the muscles and rectum, lasting some hours. Better still, a weak electric current, passed through the same sensitive region, causes a rise of temperature with every passage of the current, and the pyrexia so produced, in the oxygen consumed and carbonic acid given off, resembles a real fever. This points, apparently, to a thermogenic tract in the brain of the rabbit, and therefore, probably also, in the brain of man. By stimulation of this tract a fever is produced "by a direct action on the central nervous system." Fever, then, is due to an action on the central nervous system. But fever is not necessarily accompanied by high temperature, as we may have more heat produced than normal, and also at the same time, far more lost than normal, and consequently a fall of temperature, the fever being the excessive heat production, and the more or less excessive waste.

Slight waste and excessive heat production—high temperature.—Once the temperature has mounted to a considerable height, it may remain there balanced, in a stable condition, although the pyrexia is really gone. We may even have a rise of temperature without an increased production of heat, if the heat-loss be less than the heat produced. Thus the patient may be cool and yet feverish, as well as hot without the existence of fever.

In fever there is a certain order of progression. First, disturbance of the thermotaxic mechanism; then under-action of the anabolic and over-action of the catabolic nerves, and finally, profound disorder of the mechanism of "heat loss, so that heat-waste lags behind heat-

production, and hyperpyrexia results" (Dr. Stewart's abstract in "Med. Chronicle").

FIBROMA (Molluscum Fibrosum). *N. Whitelaw Bourns, M.D.*

The growths may be few, or more frequently they are very numerous, and scattered all over the body, causing great deformity. The disease has to be distinguished from Molluscum Contagiosum, which is easily done by observing the absence of depressions or orifices at the summits of the growths.

TREATMENT:—If not too numerous, removal with the knife, by ligature, or galvano-cautery.

FRACTURES. *J. Hutchinson, Jun., F.R.C.S.*

Fractured Patella.—It will be admitted that even though close union of a transverse fracture of the patella may be obtained, the utility of the limb is often considerably impaired by the atrophy of the quadriceps extensor and the prolonged retention in a straight position. Hence some surgeons (especially the Dutch ones, Metzger, Tilanus, etc.), are content to aim at fair fibrous union only with the aid of strong plaster, and to commence early passive and active movements. Massage is applied during the first few weeks, the faradaic current used to the quadriceps, and the patient allowed to get up at the end of about twelve days.

Dr. Alderson showed a specimen of transverse fracture of the patella before the "West London Med. Chir. Soc.," April 1, 1887; it had been treated by strapping and a back splint, fibrous union had occurred with considerable separation, and subsequently the ligamentous band had been converted in part into bone.

Dr. Macewen warmly advocates wire suture of the fragments in treating fractured patella: he points out ("Annals of Surgery," March, 1887), that one reason why osseous union is so rare is that the aponeurosis dips down in the gap, and in his operations he always lifted this up. The same statement applies in a less degree to some of the cases of fractured olecranon.

Fractured Patella—Malgaigne's Hooks.—A decided tendency to the revival of this method of treatment has of late shown itself, Duplay in France, and Treves in England having reported series of cases so treated with the best results, and in America also some surgeons have spoken favourably of it. Duplay ("Arch. gén. de Med." April, 1887), uses a special modification of the hooks, Treves employs the form recommended by their inventor. If there is much effusion in the joint it can be withdrawn with the aspirator or with the tenotome which makes the punctures for the hooks. Very careful adjust-

ment is, of course, necessary, and some antiseptic, such as **Iodoform**, should be freely used. The hooks should be withdrawn at the end of four or five weeks, and in many cases bony union can be confidently expected.

Intra-capsular Fractures of the Neck of the Femur.—The occasional occurrence of bony union after non-impacted fracture is illustrated by a case reported and figured by Mr. Raven ("Lancet," August 6, 1887). The case had been simply treated by a long splint, and the specimen was obtained on the death of the patient seven years later at the age of seventy-six. Considerable osteo-arthritis had followed the injury.

The importance of recognizing the occurrence of impaction in fractures of the femoral neck, and the folly of attempting dislodgement in such cases, is impressed by Wilder ("New York Med. Journal," Jan. 22, 1887). Unfortunately the symptoms are not always very precise: amongst the most trustworthy are the following:—(1,) the iliotibial band is somewhat relaxed in comparison with that of the opposite side; (2,) there is shortening to the extent of from ½ to 1 inch; (3,) the great trochanter is somewhat higher than normal ("Bryant's triangle" being the most applicable method of measuring this); (4,) there is some eversion of the limb in nearly all cases, due to the impaction being greatest at the back of the neck; (5,) some flattening, or depression of the trochanter, and tenderness over the neck of the bone in front can usually be made out; (6,) absence of crepitus on gentle rotation of the limb. It may be noted that at least two thirds of the cases of impacted fracture are due to falls or blows on the trochanteric region.

Occasionally examples are met with of repeated fractures in the same patient, which can only be ascribed to an inherited fragility of bone, of this Prof. Stüdensky gives a remarkable instance. A boy broke one fore-arm five times, as well as one humerus once during the first six years of his life, in each case from a slight injury. Three of his brothers sustained fracture of the fore-arm during early life, one of them also broke his clavicle. Their father when young had broken one humerus three times, a femur once, whilst during adolescence, his fractures were almost too many to keep accurate account of. It may be noted that during the period at which they were liable to these multiple fractures, the subjects were, as a rule, very anæmic.

A tendency to delayed union after fracture has also been observed to occur in families or in individuals.

Fractures of the Spine.—A very remarkable case of successful

operation for old fracture-dislocation of the spine is recorded by Dr. Lauenstein in the "Centralblatt für Chirurgie" (No. 51, 1886). A young man had sustained a fracture at the dorsi-lumbar junction and, together with marked projection at this region, the usual symptoms had persisted—loss of power and wasting in the legs, incontinence of urine and fæces, and cystitis. As a plaster-of-Paris jacket failed to give relief an operation was undertaken. By means of a vertical incision over the projecting vertebræ, the arches of the last dorsal and first lumbar vertebræ were removed. The wound, treated antiseptically, healed by first intention. Gradually the limbs regained power so that the patient could walk with a stick, the urine became acid, and could be retained for considerable periods, and the rectal incontinence disappeared. By a careful analysis of cases the writer shows that if the bladder and rectum do not regain power within a few weeks after the injury, it is unlikely that further improvement in their condition will occur, and hence in carefully selected cases an operation is warranted. Since the paralysis is generally due to crushing of the cord, it is not advisable to operate on any recent case, nor on one in which there is no evidence of displacement of the vertebræ.

An interesting case showing the occasional value of extension in fracture-dislocation of the spine is recorded in the "Lancet" of August 6. The patient, a man aged twenty-eight, fell between a train and the platform in an epileptic fit. At the dorsi-lumbar junction there was evident depression of the first lumbar vertebra, the left leg was powerless and partially anæsthetic, the right one hyperæsthetic. Under ether, extension was made on the legs, and the bones evidently returned into place, but showed a tendency again to become displaced. A plaster-of-Paris case was applied (by means of a many-tailed bandage), and weight extension kept up for a few days. He subsequently had slight cystitis, but made a good recovery, and could ultimately walk well, being however obliged to use a catheter as a rule.

In a case of dislocation of the fourth cervical vertebra, reported by Flückiger, the spinal cord had been compressed, but the displacement immediately relieved. The patient recovered the use of his legs, but his arms were paralysed and changes occurred in the joints, like those met with in Charcot's disease. The skin of the arms also became œdematous and pigmented (trophic changes). Death ensued from pneumonia after six months.

Spontaneous Fractures.—An occasional cause of spontaneous

fracture is the development of a gumma in the affected bone. Of this a case recorded by Dr. Fulda ("Centralblatt für Chir.," No. 37, 1887), appears to be an example. A woman consulted him with a soft smooth swelling about the middle of one clavicle, next day the bone broke in the centre of it: with the ordinary treatment and the administration of Iodides the fracture united (leaving a marked depression in the skin), and the swelling subsided. There was strong but not conclusive, evidence that the patient was syphilitic. Upwards of a dozen similar cases have been recorded.

The treatment of ununited and of some cases of compound fracture, by the insertion of aseptic ivory pegs, is highly recommended by Socin. The ivory becomes incorporated with the bone, and is probably, to a large extent, ultimately absorbed.

Fracture of Ribs through Muscular Action.—It is said that most cases of this occur during violent coughing or sneezing. Ladroite reports one in which the fifth rib was broken in front, apparently by a violent contraction of the pectoralis major in a sudden movement of the arm. I have seen a case in which fracture of one of the lower ribs appeared to be due to a drag upon the latissimus dorsi muscle.

FRAGILITAS CRINIUM. *N. Whitelaw Bourns, M.D.*

Not an uncommon affection of the hair, which here and there shows little white specks. On microscopic examination those spots prove to be partial fracture and fraying out of the hair. McCall Anderson says, "like a couple of minute brushes stuck into one another."

TREATMENT.—Shaving and stimulating applications.

FRAMBŒSIA. *N. Whitelaw Bourns, M.D.*

Is a disease almost entirely confined to tropical regions and coloured races. Mr. Hutchinson has recorded one case occurring in an Englishman.

TREATMENT, says Dr. Imray, "is as simple as it is usually effective"—cleanliness, good food, and tonics.

FRECKLES (See Lentigo).

FURUNCULUS. *N. Whitelaw Bourns, M.D.*

The general health requires careful attention, and not infrequently **Arsenic** or **Quinine** is called for. Occasionally the affection may be arrested by the internal administration of **Sulphide of Calcium**, in ½ grain doses, or the **Hyposulphite of Sodium**, 30 grains every two hours. Locally, Bulkley recommends an **Ergot Ointment**, a drachm to the ounce, with a little **Oxide of Zinc**.

GALL-BLADDER (Surgery of) *A. W. Mayo Robson, F.R.C.S.*

The operations performed on the gall-bladder are—(1,) sounding for gall-stones; (2,) aspiration of distended gall bladder; (3,) cholecystotomy; (4,) cholelithotomy; (5,) cholelithotrity; (6,) cholelithectomy; (7,) choleduodenostomy; (8,) cholecystenterostomy.

The diseases which call for surgical interference are—(*a*) wound, or perforation of the gall-bladder; (*b*) cholelithiasis, or gall-stones; (*c*) obstruction in the ducts, either cystic or common; (*d*) hydrops and empyema of the gall-bladder.

Perforation of the gall-bladder may occur from (*a*) injury from without, as in a stab or gunshot wound; (*b*) ulceration from within, as from irritation of gall-stones; (*c*) bursting of hydrops or empyema.

Treatment.—In cases (*a*) and (*c*), immediate laparotomy is called for, as a fatal termination is otherwise almost inevitable, although cases have been recorded where patients have survived stab or bullet-wounds of the gall-bladder.

Thiersch records a case where he removed successfully, over forty pints of bile from the abdominal cavity after the gall-bladder had been ruptured by a blow.

Experiments of Schüppel and Boström apparently prove that the peritoneum can absorb extravasated bile without serious trouble.

In cases (*b*), adhesion usually occurs to contiguous organs, or to the parietes, and the gall-stones may be discharged by abscess externally, or by ulceration into the intestine. Serious symptoms often arise from peritonitis or from septic absorption.

Obstruction in the ducts may arise from catarrh; foreign bodies, as gall-stones, worms, or hydatids (see Dr. Black, "Br. Med. Journal," July 16, 1887); from stricture (see Mayo Robson, "Lancet," Oct. 31, 1885); or from external compression, by new growths, or by inflammatory exudation, thus giving rise to dropsy or empyema of the gall-bladder. If the common duct be obstructed, there will also be jaundice.

Cholelithiasis.—Since attention has been directed to the gall-bladder by surgeons, the pathology and differential diagnosis has made great progress (see interesting paper by Dr. Bristowe, "Lancet," Feb. 19th, 1887; also, one by Dr. Ord, in the "Br. Med. Journ." March 5th, 1887. In the latter paper, attention was drawn to—(1,) the existence of gall-stones without symptoms; (2,) their passage without symptoms; (3,) gall-stones giving rise to pain, without jaundice; (4,) gall-stones producing intermittent pyrexia; (5,) gall-stones producing glycosuria; (6,) reflected inflammation from gall-

stones ; (7,) the frequent co-existence of gall-stones with malignant disease ; (8,) hæmorrhage caused by their passage.

Dr. Myrtle in a paper read before the Yorkshire Branch of the Brit. Med. Association in November, 1887, related several examples of mistakes in the diagnosis of gall-stones which had come under his notice, and particularly dwelt on the difficulty of diagnosing gall-stones from malignant disease. He thought that the most frequent cause of so-called gall-stone attacks, was catarrh of the ducts, and that these cases were greatly benefited by the treatment at Harrogate.

The diagnosis chiefly rests on paroxysmal attacks of pain, starting in the right hypochondrium, and radiating thence over the abdomen and through to the right scapula : the attacks being often accompanied by vomiting or by collapse, and sometimes followed by jaundice ; but jaundice is frequently absent.

Mr. Lawson Tait says that the presence of jaundice is suspicious of malignant disease.

The formation of a tumour in the region of the gall bladder, *i.e.*, below the tenth rib on the right side, oval or pear shaped, tense on palpation and moving with respiration, points to blocking of the cystic duct ; or, if there be jaundice, of the common bile duct. The presence of gall-stones in the motion is valuable evidence, but their non-discovery is no proof of the absence of cholelithiasis. In forming a diagnosis, cancer of the adjoining parts, hydatid tumour, kidney enlargement or tumour must be eliminated, if possible.

A diagnostic point of importance is that the gall-bladder enlarges in a direction obliquely downwards and forwards in a line, which drawn from the tenth costal cartilage crosses the middle line a little below the umbilicus. The tumour may be any size ; Kocher and Lawson Tait have both operated on cases supposed to be ovarian cysts. Puncture, either by means of a fine needle or by a long probe introduced through a trocar, has been employed to sound the gall-bladder for stones. That probing is not unattended by danger is proved by the fact of death having occurred after puncture in a case of Dr. Harley's. ("Medical Times and Gazette," May 17th, 1884).

Dangers of Cholelithiasis.—(1,) exhaustion from repeated attacks of pain ; (2,) fatal collapse from acute pain ; (3,) fatal jaundice (see case reported in "Lancet," May 28, 1887, by Dr. Glover Williams); (4,) hydrops of gall bladder ; (5,) empyema of gall bladder ; (6,) perforation of gall-bladder or of ducts (see "Lancet," Nov. 12, 1887, Dr. F. M. Pope), causing abscess, or peritonitis, or septicæmia, or intestinal obstruction, or hæmorrhage.

Indications for surgical interference in cholelithiasis—(*a*) repeated attacks of biliary colic, apparently due to gall-stones, and which, not yielding to medical treatment, are wearing out the patient's strength; (*b*) In perforation from ulceration, or when there is evidence of suppuration set up by gall-stones; (*c*) In empyema, or in dropsy of the bladder; (*d*) In persistent obstructive jaundice, when there is reason to think the common duct is occluded by gall-stones. It must be remembered that jaundice adds materially to the danger (Lawson Tait). Musser and Keen ("American Journ. Med.," October, 1884) report that five out of seven cases of cholecystotomy died where jaundice was present, whereas in twenty-eight other cases without jaundice, there were only five deaths.

Aspiration through a fine needle is sometimes performed, but is not to be recommended, serious symptoms having been known to follow its performance, and in very few cases can it give more than temporary relief. Dr. Irving, of Huddersfield, reported a case where after aspiration of a distended gall-bladder with serious symptoms of obstruction, the patient made a complete recovery.

English surgeons for the most part prefer *Cholecystotomy*, which is performed by incising the parietes over the most prominent part of the tumour, if one be present; but if not, by a vertical incision from the tip of the tenth costal cartilage. If the gall-bladder be distended, it is aspirated before incision; after incision the edges are sutured to the parietal peritoneum and skin, either by continuous or interrupted silk sutures, a drainage tube being inserted into the incised gall-bladder. If gall stones be present they are removed (*Cholelithotomy*) by forceps or scoop. If a gall-stone be impracted in the duct, it may be crushed (*Cholelithotrity*) as suggested and performed by Mr. Lawson Tait ("Brit. Med. Journ." July 12, 1884, and "Lancet," Aug. 29, 1885). Küster, Berlin, recommends suture of the gall-bladder, and returning it into the abdomen ("Centralblatt für Chirurgie," 1887, No. 25, p. 75). See also cases by Mr. Thornton, ("Brit. Med. Journ." Nov. 26, 1887).

Dr. Jones ("Med. Chron." for March, 1887) reports a case of cholecystotomy performed in two stages, the gall-bladder being opened on the sixth day, giving exit to several ounces of pus, and a large gall-stone. The patient recovered.

On the continent *Cholecystectomy* (Laugenbuch's) is performed, by preference, in order to remove all future possibility of gall-stone formation, it having been clearly made out, that the concretions form in the gall-bladder, and not in the liver. Laugenbuch performs this operation for hydrops, empyema, and cholelithiasis. Mr. Greig

Smith ("Abdominal Surgery," p. 552) would limit it to—(1,) when the bladder is contracted and cannot be sutured to the parieties; (2,) when after perforation from ulceration or empyema the tissues are thin and will not bear suturing. The operation is performed by separating the bladder from the liver, and dividing the cystic duct between two ligatures: the proximal end of the duct is also secured by one or two Lambert's sutures. The area of operation is isolated by sponges. Cholecystectomy is a more formidable and dangerous operation than cholecystotomy. (See "Revue de Chir.," March, 1886; also, "Annals of Surgery," May, 1886; also, Tillmann, "Centralblatt für Chirurgie," 1887, No. 25, p. 76).

It has been proposed when the obstruction to the passage of bile along the common duct is due to irremediable causes, that the gall-bladder shall be opened and stitched to an opening made in the duodenum (*Choledudodnostomy*), or into another convenient part of the intestine (*Chole-enterostomy*). For details see paper by Dr. Gaston, "Brit. Med. Journ.," Feb. 5th, 1887.

GANGRENE. *W. H. Elam, F.R.C.S.*

Dr. Scott Lang ("Edin Med. Journ.," January, 1887) has published a paper on gangrene of the limbs, "To ascertain whether gangrene is likely to follow severe injury of a limb," the author recommends the following method: "Gently raise the limb, and keep it raised for two or three minutes, in order to empty it to some extent of blood. Then apply a tourniquet or piece of elastic webbing on the proximal side of the injury, and keep it applied for about a minute. Lower the limb, remove the tourniquet, and, if sufficient circulation remains, the part beyond the seat of injury will blush very red, and will show in an unmistakable manner the condition of the bloodvessels."

Professor König ("Centralblatt für Chirurgie," No. 13, 1887) has contributed an interesting paper on the subject of amputation in diabetic gangrene. He points out that diabetic patients are liable to a low form of inflammation; that their tissues present a favourable nidus for the development of micro-organisms, and show a ready disposition to necrose. He suggests that in all cases of apparently spontaneous gangrene, or of gangrene from trifling causes, the urine should be examined for sugar.

In inflammatory affections, in necrosis, and in gangrene occurring in diabetic subjects, the first and most persistent treatment should be by the use of antidiabetic measures. Amputation should not be entertained until the diabetic symptoms are retrograde. If in spite of treatment and careful local antiseptic measures, the local and general

symptoms do not improve, then operation must be undertaken as a possible means of saving the patient's life.

Brunner reports cases of gangrene of lower limb after subcutaneous wound of popliteal artery. He shows how the peculiar structure of the parts about the knee joint, favour the development of gangrene, especially the large connective tissue space behind the joint and the firm fascia which binds down the vessels as they pass under the aponeurotic arch beneath the muscles of the calf.

The popliteal space becomes filled with extravasated blood which presses upon the veins and totally prevents the return of blood, as it also prevents the formation of a collateral circulation. ("Deut. Zietschft F. Chirurg.," B. 25, p. 100.)

GANGRENE OF THE SKIN. *N. Whitelaw Bourns, M.D.*

May be idiopathic or symptomatic. When idiopathic it is usually symmetrical, and may be a very grave disease.

TREATMENT.—According to general principles.

(We have found **Phosphorus** given internally a most valuable remedy.—ED.)

GASTRIC ULCER. *Alfred G. Bateman, M.B.*

The correct diagnosis of ulcer of the stomach from carcinoma is most important, and Korczynski and Jaedorski in an elaborate article have thus tabulated the points of difference :—

Ulcus.	*Carcinoma.*
1. A high degree of an acid Gastric Catarrh.	1. Very marked mucus catarrh except in young persons.
2. Unusually large amount of HCl. and very energetic digestive power of gastric juice.	2. Complete absence of HCl. and diminution of the formation of pepsin.
3. Blackish brown coffee ground vomit, with a smell of peptonized blood, and with destruction of red blood cells.	3. Light, chocolate coloured vomit smelling of fatty acids. with remnant of red blood cells.
4. Appetite preserved or abnormally increased.	4. Appetite much diminished.
5. Excessive thirst.	5. Usually no thirst : often a desire for acids.
6. Burning, cutting, often pressing pain of great intensity.	6. Dull, continuous pain, with a sense of pressure.
7. Usually no palpable tumour.	7. Usually a painful tumour to be felt.
8. Vomiting in most cases.	8. Vomiting in one half the cases.

The treatment of ulcer of the stomach adopted by these observers differs somewhat from that in ordinary use. In cases of hæmorrhage absolute rest in bed for the *first two days* is advised, and a small ice-bag placed over the stomach. **Ice** in small pieces slowly swallowed,

only permitted to quench thirst, as it increases the secretion of acid **Sod. Borate** and **Ext. Opii**, with small quantities of **Carlsbad Water** were given to diminish acidity and increase mechanical activity of stomach. No food or drink was allowed. If the hæmorrhage has ceased after the second two days no more ice is to be given. Food then is to be cautiously given, but at once reduced in quantity if pain follows. Great care must be exercised for three weeks at least; only a small amount of stimulant must be permitted in cases of great debility. If there was no hæmorrhage the starvation of the first two days need not be ordered.

Experiments by Riegal prove that there is a close connection between the hyperacidity of the contents of the stomach and the progress of an ulcer. He considers that the hyperacidity is the primary cause and the ulcer the secondary effect. The hyperacidity takes place only after nourishment has been taken, and is, so to speak, an expression of a condition of irritation or of a greater vulnerability of the mucous membrane. If the latter be injured only slightly (erosion) the hyperacidity soon causes the formation of an ulcer, and again, the healing of the ulcer is much retarded, and it may deepen. All treatment must therefore be directed against this acidity. **Astringents** are useless. No solid food must be given by the mouth: milk, peptone, bouillon only. **Nutritive Enemata** are most useful. **Mineral Waters** are of great importance, as the alkalies and salts they contain not only neutralize the acids in the stomach but also remove the acid chyme.

To thoroughly remove acid, Riegal recommends the washing out of the stomach at night.

Milk must not be given in too large quantities, as dilatation of the stomach will result: not more than two or three litres daily should be allowed, in cases where an exclusive milk diet is the line of treatment adopted.

Pepsine is not always a safe remedy where lesions of the mucous membranes are found. A case is reported where this was given for septicæmia following on dysentery, where a sudden change took place in the convalescence of the patient. Temperature rose rapidly, with quick pulse, followed by pains in neck with swelling about left parotid and surrounding tissues. An active diarrhœa was set up and continued to the last, peritonitis occurred and death took place twenty-one days after the commencement of the illness, and seven days after relapse. Dr. Chenery considers that this was due to the absorption of the pepsine directly into the circulation.

Researches by Dr. Silbermann point to the fact that the kind of anæmia characterised by deficiency of hæmo-globin in the red corpuscles of the blood is particularly favourable to the production and maintenance of circular ulcers of the stomach. In the anæmia of hæmoglobinæmia he considers that all the conditions are present which are required by various theories for the production of gastric ulcer, namely, arterial anæmia (Klebs), venous hyperæmia of the gastric mucosa (Key), venous stasis in the hepatic vessels (Gunsberg), circumscribed hæmorrhages (Virchow), and lastly, diminished alkalinity of the blood (Leube.)

The influence of syphilis on the pathogeny of ulcer of the stomach :— Gastric catarrh is often set up by syphilis or by syphilitic arteritis, and when instead of cicatrices, ulcers are found in syphilitic persons having the characters of Crudeilher's ulcer, it becomes a question whether the primary erosion was not of a specific nature. An erosion of this kind can easily be capable of becoming a round perforating ulcer by the action of the gastric juice. The so-called simple ulcers of the stomach occurring in syphilitic subjects must be studied with great care. It is well known that **Pot. Iod.** and **Mercury** are often used successfully in the gastric disorders of those suffering from secondary and tertiary syphilis, but of course, neither gastric troubles nor hæmatemesis are sufficient to prove the presence of a lesion of the stomach itself. Gastric cicatrices are only of moderate value in diagnosis unless gummata are also present, as then it would be reasonable to consider the scars evidence of bygone syphilitic lesions. At present the diagnosis is surrounded by difficulties, but when it is made, much can be done by suitable treatment of an anti-syphilitic nature.

REFERENCES.—Dr. Chenery, "Therapeutic Gazette," N. Y.; Dr. Silbermann, "Lancet;" Prof. Korczynski, and Jaedorski, "Deutsch. Med. Woch."

GLANDERS, EQUINIA, (FARCY). *N. Whitelaw Bourns, M.D.*

An acute contagious disease, always derived from the horse, not uncommonly proving fatal.

TREATMENT.—General and constitutional.

GLAUCOMA. *Wm. Lang, F.R.C.S.*

Rheindorf has for many years practised removal of the lens, combined with tearing of the posterior capsule in cases of glaucoma. This proceeding gives unexpectedly good results in cases of absolute glaucoma, which would otherwise need excision for the relief of pain; it does not lead to intra-ocular hæmorrhage. It gives equally sur-

prising results in cases of glaucoma, in which iridectomy or sclerotomy have failed. It is, of course, not to be recommended in hæmorrhagic glaucoma.

Javal observed an attack of glaucoma after the instillation of a drop of **Cocaine** in an eye, previous to this the presence of the disease was doubtful. The attack yielded to **Eserine.**

GOUT. *J. Mortimer Granville, M.D.*

Very little has been added to the information already possessed about gout, but there are indications that the prevailing view is verging towards that which forms the basis of the "iodine treatment," namely, that the accumulation of uric acid in the blood is the proximate cause of the malady, and that whether that accumulation be due to over-production or simple retention, it is more reasonable to rely for relief and cure on *elimination* than upon the *limitation of supplies.* It is beginning to be recognized that in organisms so constituted as to form uric acid in excessive quantities this will be done however rigorously the diet may be controlled; while beyond question the vital strength of the subject of the uric acid diathesis is reduced—often dangerously, especially in cases where albuminuria is present—by even a comparatively small decrease of nitrogenous food. It is also perceived that the kidney is the proper, and practically the only effective, organ of elimination. The attempts to prevent or relieve gout by eliminating bile from the intestines and so removing from the system a quantity of glycocine, which, if re-absorbed, would—as it is supposed and assumed—lead to the formation of an excess of uric acid, is not so satisfactory a mode of treatment as that of working off the uric acid through the kidneys. The loss of nutriment resulting from, and the disturbance of the chemico-physiological processes of the organs by, the waste of normally re-crementitious bile when cholagogic-purgatives are used, constitutes a serious drawback to that method, and in many instances involves much clinical mischief. The use of purgatives in the treatment of gout is therefore less constant than it was. The experience of this last year has greatly strengthened the confidence of those who rely on the use of remedies which simply break up and throw out uric acid, or promote its elimination, and the opinion is confirmed that the adoption of this method, in the course of acute attacks and during the intervals, gradually educates the kidneys to eliminate freely, so that after a while it is only needful for the subject of the uric acid diathesis to drink rather more than usual of any solvent fluid when feeling that an attack of gout is imminent in order to produce a copious outcast of

urates or of uric acid, either as a "cayenne pepper" deposit or in solution, and thereby to avert the attack and prevent deposits. Meanwhile the *regime* of the gouty patient is becoming much more liberal, and the aim is to maintain his strength by a tonic treatment even in the face of fever and a high temperature, the fever being recognized as irritative, like the febrile disturbance attending the re-action after collapse from shock in surgical maladies, and the high temperature rather due to an admixture of hot blood from the deeper vessels with that contained in the surface vessels—by vaso-motor depression and consequent dilatation of the vessels—than the result of that exaltation of the metabolic processes to which the increased heat has been generally attributed. A further exposition of the theory and treatment I have ventured to commend to the profession is as follows :—

Gout is not at root, so to say, a *disease*, but an aberration of function due to organized habits of life which have during a long series of generations influenced and are still influencing development. Meat has been denied to gouty patients in face of the fact that those animals which feed exclusively on flesh produce very little uric acid, while those which live exclusively on vegetables produce little else than uric acid ; and sugar has been condemned, whereas it is demonstrable by direct experiment that sugar favours and augments the elimination of uric acid. To such blunders are those led who begin at the wrong end or jump to conclusions. Knowing no more than we do of the cause or nature of gout, and being simply aware that it is wholly wrong to have so much uric acid in the blood as is found there in gout, the common sense view of remedial policy must be *to get rid of it*. The plan of ridding the blood of the uric acid which is in excess, whether that excess be due to over-production or to deficient elimination, by drinking freely and determining the flow towards the kidney is the common sense and only true policy. If it be objected that the function of the kidney is likely to be impaired by disease in most advanced, and not a few early, cases of the uric acid diathesis. that is no sufficient objection to urge against the method, because if the blood-pressure be raised in the vessels of the kidney, the tubes are more likely to be flushed, and thus kept patent than if they are not thus distended; and as a matter of fact the best treatment for a decidedly gouty or granular kidney is now recognized to be that which mechanically compels its action by favouring the dilalation of its blood-vessels, for example, the exhibition of nitro-glycerine. Moreover, the dilution of the blood itself by an abundant supply of

fluid has the effect of rendering it better able to hold the uric acid in solution, and many have thought, and some are still of opinion that an "attack" of gout is, or may be, brought on by the blocking up of the tubes of the kidneys with crystals of uric acid. In so far as this is the fact, "flushing" is the obvious remedy.

Assuming then that the gouty should make it a point of policy to drink very freely, what is it best they should drink? There is no other such solvent of uric acid or urate of sodium as pure water. The gout may be kept in abeyance if not cured by any one who will make it a practice to drink some three or four pints of water daily. Cullen says, "for preventing or moderating the regular gout, water is the only proper drink." I would not, however, go so far as that, for I believe beverages of a moderately stimulating nature are not only desirable but necessary in the great majority of gouty cases. There cannot, however, be any doubt that large quantities of pure or unloaded water ought to be taken with a view to the elimination of the uric acid. I have never been able to understand clearly why so many practitioners insist on their patients drinking water already charged with alkaline carbonates. The task of supplying a base for the acid is a needless one. The blood is already too heavily loaded with salts of uric acid, and is fast depositing the same. The idea of neutralizing the acids on which the acidity of the urine depends, is I am persuaded, a misapprehension, for the urine becomes increasingly acid as it carries away the acids or acid salts accumulated in the blood and thus restores the normal alkalinity of the circulating fluid.

I have of late used distilled water—saturated with hydrogen gas (to about 2 per cent. by measure) and slightly iodised,—with advantage as a solvent or diluent drink. Not less than four pints of water, either pure or holding proportionally very small solids, is to be consumed in the twenty-four hours; precaution being taken by measuring both the fluids consumed and the urine passed, and by testing the latter to make sure that the water thus taken is properly eliminated, and that it answers the purpose of carrying off the uric acid or urates which it is required to eliminate. This last point can readily be determined by estimating the uric acid and the urea quantitatively. Haycraft's uric acid test and the hypo-bromite test for urea are so facile that no difficulty can be encountered in having the proper examination made at suitable intervals.

The sufferer from gout needs above all things to be well nourished, and to this end he must be well, though wisely fed. Weakness is the condition above all others to be dealt with in gout. How many lives

are lost by placing the gouty on a diet from which meat has been excluded, because, forsooth, there may chance to be a little albuminuria or some gouty dyspepsia ; although the presence of a trace of albumen in the renal excreta of gouty patients is one of the very commonest of experiences, and in the majority of cases it means nothing more than imperfect disassimilation, the prognosis being favourable.

Meat in fair quantity, say from ten to twelve ounces twice daily on the average, or ten ounces for men living ordinary lives, and more for those who are much worried or who work their brains heavily ; with soup, fish, bread, potatoes, and a fair supply of other vegetables, and fruits, particularly those which are slightly acid, ought to be looked upon, as a moderate and indispensable diet. There should be no fixed rule of life, and above all things, there should be no great monotony in the way of living in gout. The digestive organs resent any attempt to coerce them into what is thought to be good behaviour, and loss of appetite, flatulency, and sleeplessness result. Sufficient exercise, by walking and riding especially, is desirable ; but great fatigue should be avoided. I have deferred what I have to say about stimulants until this point, because their abuse is generally connected with the sense of fatigue and exhaustion. I believe a fair amount of stimulant is almost invariably requisite in gout, but what is taken ought to be *taken with food.* It is not in my experience wise to use exclusively whiskey or any other proximate form of alcohol ; wines are far better. For ordinary purposes, I recommend the lighter white wines, such as the hocks; with dinner a fairly good claret, after dinner an old port, matured in the wood, not left in the cask so long as to lose all its goodness, but long enough to ensure perfect maturity of the fermentative process ; very good madeira, of fair age, is also an excellent wine for the gouty. I do not think that as a rule sherry is to be recommended. Champagne, if dry, *i.e.*, not heavily liquoured, is *very desirable* as an occasional wine. It contains a relatively small proportion of alcohol ; but is an excellent restorative and greatly aids the free elimination of uric acid by the urine. As to quantity : a glass-and-a-half at luncheon or a tumblerful of Pilsener beer, two glasses at dinner, and one after ; and a glass of claret or port wine and water with a biscuit before retiring to rest when either the hour is late or much fatigue of mind or body has been incurred since dinner, may be regarded as an average rule of habit. It is a mistake to go to bed with the stomach empty, if there be any sense of exhaustion, or if, as so often happens in gouty cases, there is a tendency to sleeplessness. To remedy the latter evil, a most grave one when the habit of wakefulness is formed,

a moderate and light supper of fish or whipped eggs, but with little bread, which takes a very long time to digest—is desirable. The clothing of the gouty should be light, and not too warm. This is, I have been led to conclude by experience and observation, a most important matter. The organism should be encouraged, and even compelled, to maintain its natural temperature, in spite of ordinary losses by radiation.

Five hundred analyses of gouty urines have resulted in the following general conclusions. There is nothing really morbid about these urines. They group naturally at the normal points. The specific gravities of '15 and '20 are the clustering points. Perhaps the '15s are a little too numerous in proportion to the total number, but it could scarcely be otherwise with the urines of persons seeking medical advice. They are not likely to be quite "fit," and presumably their average disassimilation will be somewhat slow and low; but the deviation is not greater among "gouty" people than it would be among invalids of any class. The distribution of urines in regard to urea was not quite so satisfactory. The majority had more than Parkes gave as the normal, which was 8 grs. per oz., but 118 had less than that really meagre proportion, and of these 118, 76 had specific gravities above '12, so that there cannot have been any great dilution. Nevertheless, I doubt whether the urines of any similar number of ailing folk would have made a better show.

Speaking broadly, though with many notable exceptions, the acidity increases with the urea, 12 urines showed less than one part per thousand of acid calculated as oxalic; 53 more than one part but less than two; 63 more than two and less than three parts; 67 more than three but less than four; 35 between four and five parts of acid per thousand; 32 from five to six; 13 showed over six parts; 8 more than seven; 4 had upwards of eight parts; and 3 above nine. Most authorities put the normal at about 2.5 per thousand, so that one of the larger numbers above falls near the mean. A proportion of 3 to 4 parts per thousand is, however, probably common in health.

As regards the part played by the nervous system in the production of "attacks" of gout, I believe the mode of its operation is reflex. Just as in diabetes the excitation, which either produces an excessive formation of sugar or inhibits the action of the liver in destroying it, whichever may be the true explanation of the disorder, is propagated to the diabetic centre in the medulla along the pneumogastric as an afferent nerve, the sympathetic being the efferent and conveying the active impulse to the liver; so the stimulation, however initiated,

which either produces an excess of uric acid or inhibits the process of metamorphosis which would, under normal conditions, convert the uric acid into something else, is probably propagated through the pneumogastric to the centre, and reflected through the sympathetic to the seat of the uric acid formation or accumulation, that is the liver. That the vaso-motor centre is likewise commonly, either excited or inhibited is evident, and this action also is reflex. In short, the whole disturbance, whether of a special liver or kidney centre or of some particular part of the vaso-motor centre in special relation with the uric acid-forming or destroying apparatus, is reflex. And it follows that, although the nervous system is the prime mover in the production of the phenomena of gout, as it doubtless is in the development of the great majority of functional and nutritive disorders, the exciting, if not also the predisposing, cause of the trouble must be looked for at the periphery rather than in the centre ; that is to say in this instance in the liver or kidney, or both. Bearing this in mind, I proceed to notice a particular disturbance in the digestive apparatus, to which I have for some time past been devoting much attention, and which I am not without hope may, hereafter, be found to supply a key to the mystery of gout in some of its commonest manifestations. Those who have seen much of this malady and observed its first approaches in any considerable number of cases, can scarcely fail to have noticed that long before a man has an attack of gout or any clearly recognisable symptom of the so-called disease, even in one of its irregular forms, he is almost sure to have complained of a special pain or uneasiness, or "sinking," or "coldness" or "soreness" at the epigastrium, occurring, generally, a short time before or at the moment of commencing, a meal, and followed by flatulency with or without eructations, but nearly always accompanied by a more or less sudden outpouring of "water in the mouth," and other symptoms characterised as "dyspeptic." At the same time he has, as a rule, at least for a time, and commonly a considerable time, been accumulating fat chiefly about the abdomen. There is often so much tenderness on pressure at the epigastrium, accompanied by what seems to be "enlargement," that either ulcer of the stomach or pyloric disease may be suspected. The seat of the trouble I believe to be the duodenum, which is not unfrequently much distended, first with fluid, then with gas, and later on with solid matters passing out of the stomach after a meal and there delayed in their progress. I have drawn attention to this symptom in "*Gout; in its clinical aspects*" (Churchill), but without offering the suggestion which I now venture to submit for consideration. What happens is, I believe, a

sudden out-pouring into the duodenum of the pancreatic secretion, with the effects, first, of setting up local irritation, and, second, of exaggerating a stage in the process of digestion. We do not know the precise quantity of the pancreatic juice normally discharged into the duodenum at, or before, the commencement of a meal, but it has been demonstrated by experiment to be large. We know that this fluid must, for the integrity of the first stage of intestinal digestion, be duly mixed with bile, which probably is not, in the cases to which I refer, instantly forthcoming, owing to failure of the liver function. We are aware that the pancreatic juice emulsifies fats, rendering them especially easy of absorption, that it acts directly on the starchy element of the food, converting it into glucose, and that it has a special tendency to rapid decomposition if not promptly mixed with bile. It is therefore easy to see that if the out-pouring of the pancreatic secretion be untimely or excessive it is likely to set up considerable disturbance. Temporary relief for this form of dyspepsia may be often, as is well known, obtained by small doses Sulphate of Magnesia which coagulates the panceatine. That the duodenum is the seat of the special form of gouty dyspepsia to which I allude cannot, I think, be doubted, and it is worthy of note that the drugs which have, from time to time, been regarded as particularly useful in gout, have a special action on the duodenum. My theory, then, is that in some, if not in most, forms of gout, the irritation set up in the duodenum by a pancreatic emission in advance of, or without, the excretion of bile, is the primary exciting cause of the reflex nerve-disturbance which either inhibits or over stimulates, the uric acid function, with the result that this acid and its salts accumulate, and the uric acid diathesis obtains. I do not propose this as exhaustive or complete, but as a tentative and working hypothesis, and I submit that *pancreatic dyspepsia* is one of the earliest indications of gout, and calls for prompt treatment in view of what is likely to follow.

I must content myself with the bare mention of this matter on the present occasion ; but if the hint thrown out should induce other observers to study a train of symptoms which unquestionably precedes the development of gout in a large proportion of instances, and which gives rise to a form of indigestion so characteristic that it deserves to be recognized as "pancreatic dyspepsia," my purpose will be fulfilled. Whether the immediate cause of the sudden and copious emission of pancreatic juice into the duodenum be vaso-motor inaction permitting a sudden influx of blood to the organ with the result of an almost instantaneous outpouring of its secretion as happens when the vagus is divided and the sympathetic is stimulated experimentally, or whether

the gland fills up at leisure and simply empties itself when distended at rhythmically recurring periods, is doubtful; but the recurrence of the pain and disturbance in these cases at fixed times, even if the meals are irregular, would seem to point to the latter mode of causation. However this may be, I think the pancreas plays the first part in the disturbance, and the sluggishness of the hepatic function, which leaves the pancreatic fluid without the required admixture of bile is a secondary but essential cause of the disorder; and third, the action of the pancreatic juice, either almost alone or with much less than the normal admixture of recrementitious bile containing its due proportion of taurochlorate of soda, upon the food that passes into the duodenum is of a nature to leave the products of stomach and intestinal digestion for absorption and transference to the liver by the portal system in a condition peculiarly likely to bring about those physiological errors in the glycogenic and cognate processes which result either in the excessive formation of uric acid, or in arrest of the subsequent metamorphoses by which it should be converted or destroyed. I will only remark in conclusion, that possibly some portion of the good effects of the iodine given in gout may be due to its action on the pancreas after the fashion in which it is known to act upon other glands; and that the value of the administration of taurochlorate of soda in this particular form of gouty dyspepsia with obesity, may perhaps depend on the power of that salt to *saponify* some of the fat consumed, instead of leaving the whole of it to be simply *emulsified* by the pancreatic juice, and so taken up too greedily by the lacteals.

Dr. John Kent Spender, takes a directly contradictory view of the requirements of the gouty subject; and while defining gout as "a limited retention in definite parts of the body of fluids overladen with uric acid combinations," lays down a plan of treatment of which the following is a summary.

The first point of importance in Dr. Spender's opinion, is a strict limitation in the *quantity* of the food. He contends that as Ebstein says, the gouty patient stands in the front rank of those who must cease to eat as soon as the first feeling of satisfaction comes on. The food should be so prepared as to give the stomach as little trouble as possible; and within a definite range, the dietary should vary in quality and mode of cooking. No plan of diet ought to be adopted which causes bodily weakness, as gout is never cured or prevented by starvation.

The breakfast should consist of weak tea with plenty of milk or a little cream, crisp toasted bread, and a fair allowance of butter and

cold boiled bacon. Small slices of fried bacon are not injurious, if the lean part be put aside. Eggs are best boiled, rather "underdone," and only the yoke must be eaten. Sugar must be taken very sparingly, as well as all substances which are easily transformed in the system into sugar, as arrowroot, rice, sago, tapioca.

An early dinner is preferable. Mutton, white fish, poultry and game are usually harmless ; nearly every vegetable which is in season may be permitted, if properly dressed ; but potatoes only in a small quantity. When the gouty paroxysms are frequent and severe, butchers' meat should be forbidden for several weeks, or even months. Meat which has been twice cooked is always indigestible. Any light pudding of milk, eggs, and flour, may be allowed. Of condiments or "relishes," only that quantity should be taken which is absolutely necessary to make the food palatable. Fresh cherries, strawberries, and grapes are wholesome, and so are baked or stewed apples and pears.

An early evening meal may include cold chicken or a little sweet-bread, with cocoatina and milk. Oatmeal porridge makes a nourishing supper. As a rule, alcohol helps the developement of gout ; and robust persons with a strong gouty tendency ought to be "total abstainers." But in gout (as in all other diseases) the prescription of alcohol may become a necessity, in order to save a patient from greater evils. A weak person suffering from asthenic gout may be improved in health by a daily ration of mild wine, diluted with an aërated alkaline water. All spirits are dietetic poisons, whether diluted or not. Tobacco-smoking contaminates the blood just when we desire to keep it most pure.

The habits of any one predisposed to gout ought to be simple and active. The "constitutional walk" is a daily duty ; and all exercises and sports should be practised, which strengthen the muscles and confirm their tone. Nothing is to be done, however, which causes exhaustion or more than a healthly fatigue. The mental powers need occupation and diversion ; but evening meetings and amusements must be rare and early. A proper amount of sleep is important. There should be morning bathing in either cold or tepid water, according to weather, age, and resisting power of the system. Turkish baths are sometimes useful. Limbs should be shampooed, and gouty joints manipulated. Woollen clothing ought to be worn all the year ; and with well-fitting shoes and woollen stockings the feet can be kept always dry and warm.

Mineral waters stand in a sort of intermediate position between diet

and medicine. The internal use of hot mineral waters may be called *thermal food*, if guided by tact and experience. This is not the place to discuss the external and internal application of the **Bath Thermal Waters**; but no one can doubt their great usefulness in proper cases of chronic gout.

Dr. Angel Money has recently directed attention to certain forms of Paralysis, which he designates "gouty," treating them on the dietetic principle, as the outcome of over-stimulated nerve centres and loaded blood.

GUINEA WORM (Filaria Medinensis). *N. Whitelaw Bourns, M.D.*

Is said to be due to the presence of the filaria sanguinis. Other authorities maintain that the young worm bores into the skin, and takes up its abode in the deeper tissues. The affection is a tropical one. Treatment consists of the removal of the worm, and different methods have been adopted to accomplish this end.

Dr. Faulkner has recently recommended **Electrolysis.**

HÆMATIDROSIS. *N. Whitelaw Bourns, M.D.*

The escape of blood or blood-stained fluid from the cutaneous surface is a very rare disease, most frequently found in girls suffering from menstrual derangement; but the affection is not entirely confined to the female sex, as shown by Hebra's case occurring in a young and strong man.

Bulkeley says the treatment must be directed against the condition present, with **Ergot** to restrain the hæmorrhage.

McCall Anderson thinks the abstraction of blood, locally or generally, is more likely to be useful than a tonic and stimulating plan of treatment.

HÆMATURIA. *Robt. Saundby, M.D.*

This is a symptom common to a large number of pathological conditions, differing in their seat, their nature, and relationships. Of many of these it is a prominent, in not a few the sole prominent symptom, while the difficulties of differential diagnosis are increased by the fact that there are cases which are not distinctly referable to any known cause.

Blood in the urine may be in a corpuscular form, or the hæmoglobin may be free. The latter is called hæmoglobinuria. These two varieties cannot be differentiated except by the microscope.

Speaking broadly, hæmaturia can generally be recognised by the unaided but experienced eye, even if present in traces only. It is characteristic of blood that its solutions are dichroic, appearing red by reflected, and green by transmitted light. The action of the acid urine

changes its bright red colour into a dirty brown, so that urine which has remained in the bladder for some time mixed with blood is not red, but smoky brown, or porter coloured, according to the amount of blood present.

The microscope readily detects blood corpuscles in the sediment of urine. They are generally altered in appearance, being swollen they have lost their bi-concave shape, and they tend to shed their hæmoglobin, becoming hour-glass shaped, vacuolated and finally colourless discs.

The tincture of guaiacum and ozonic æther test is performed by adding 1 drop of tincture of guaiacum to about a drachm of urine (which in doubtful cases should be drawn up by a pipette from the bottom of the glass), shaking and adding 20 or 30 drops of ozonic ether, when a blue colour developes in the presence of blood. According to Prof. Michael Foster, fibrin gives this re-action as well as hæmoglobin, but fibrin is not likely to be present in urine apart from blood. The two objections to the test are first, that it is not very delicate, the microscope often discovering blood when this test has failed, and secondly, that the urine of patients taking iodide of potassium gives this re-action ; but a knowledge of this is sufficient.

The spectroscope readily detects traces of hæmoglobin solution, the vessel containing the urine having only to be placed between the light and an ordinary pocket spectroscope applied to the eye, when two bands will be visible between *D* and *E* in the yellow and green of the spectrum. If the colouring matter has become brown (methæmoglobin) another band will be seen in the red in addition to the other two.

When the hæmoglobin is present in an insoluble (corpuscular) form, the urine must be filtered, and the filter paper digested in **Alcohol** and **Ammonia**. This fluid should be examined, when a faint shadow in the orange may be visible ; but on adding **Ammonium Sulphide**, the two bands between *D* and *E* show themselves, disappearing when the fluid is shaken with air, to return again on standing.

The differential diagnosis of the various sources of hæmaturia is frequently a matter of great difficulty, and is one in which surgery should seek aid from medicine, and medicine from surgery.

Hæmorrhage from the kidney substance is characterised by the presence of blood casts of the renal tubules : hæmorrhage from the pelvis of the kidney has no such constant sign, but may be accompanied by casts of the ureter. It is usually accompanied by local pain.

Hæmorrhage from the bladder may be accompanied by symptoms of local disease, stone, ulcer, villous growth, etc. ; but in the absence of such symptoms the diagnosis must be made by excluding other causes, and by sounding and washing out the bladder.

Hæmorrhage from the urethra appears independently of micturition, is bright red in colour, and is usually associated with local symptoms. Further information upon the diagnosis of these various forms will be found under special articles. (See Kidney Diseases in general).

TREATMENT OF HÆMATURIA—The rational treatment of hæmaturia depends upon the accurate diagnosis of its cause. Hæmostatic drugs are not very satisfactory. **Acetate of Lead,** 1 to 3 grains in pill every four hours ; liquid **Extract of Ergot,** in ʒss. doses every hour or less frequently, according to urgency; **Tincture of Hamamelis,** 15 to 20 minims every two or four hours ; **Gallic Acid,** 10 grains every four hours; all these may be tried, with an ice-bag to the supposed seat of hæmorrhage, and dry or wet cupping of the loins in renal hæmaturia. A *sinapism* over the loins has been known to do good.

HÆMORRHOIDS (Medical Treatment). *Alfred G. Bateman, M.D.*

Mr. Mitchell Banks, dealing with the palliative treatment of hæmorrhoids, recommends **Hammamelis** made up into an ointment : the old ointment of **Galls** and **Opium** after this is the best remedy. As an aperient, giving soft semi-liquid stools, the **Prussian Liquorice** powder is far better than the mineral waters, which produce a sharp, sudden, and copious burst of motion shortly after they are taken, accompanied with a good deal of straining, which is naturally injurious. Tepid **Enemata,** of about 8 or 10 ounces, are most useful, and cannot do any harm. Cold water sponging *immediately* after the stool is passed is strongly recommended, as it causes contraction of the blood vessels and their complete retraction. Afterwards careful drying with a soft towel (not using paper) ensures comfort for the remainder of the day. For inflamed piles there is nothing equal to the cold poultice made with quite stale bread and water. A tightly wedged mass of this material thrust in between the nates and kept firmly in its place by a perineal band, soothes and supports the piles. The application of fuming **Nitric Acid** is considered by Mr. Mitchell Banks as the most certain remedy in cases where an operation is contra-indicated. Of all the intermediate methods of treatment between complete removal and mere palliation, there is no more satisfactory method of treatment, except of course in really serious cases where the piles are large.

REFERENCE.—Mr. Mitchell Banks, "Liverpool Med. Chir. Journal," July, 1886, p. 292.

HAY FEVER.

Prosser James, M.D.

The nature and treatment of this malady continues to be freely discussed by specialists. Since Hack included it among the diseases to be cured by treating the nasal passages, rhinologists have claimed it as entirely within their department, although on somewhat different grounds. While some attribute it to distinct organic disease in the nose, others look upon it as a nasal neurosis. Dr. Solis Cohen, John Mackenzie and Hooper, upheld the latter view at the ninth annual meeting of the American Laryngological Association.

Dr. John Roe treats this disorder by cauterisations of the nasal passages. He considers the affection to be due to the influence of local irritants on the nasal fossæ, which are diseased and unduly sensitive. He believes that all diseases of these tissues induce in the ganglionic centres connected with them an abnormal activity which is reflected to other organs. Hence the importance he attaches to vigorous treatment of what he regards as the initial lesion, viz., disease of the nasal fossæ. He remarks that the condition of the pharynx, larynx, and bronchi must not be overlooked. Enlarged tonsils also keep up the irritation in the turbinated bones.

Dr. De Havilland Hall has found local applications of the galvano-cautery to the nasal fossæ valuable in cases of hay fever, asthma, and paroxysmal sneezing. He has also found the use of carbolised smelling salts very useful.

Sir Andrew Clark does not employ cauterisations, but nevertheless regards local treatment as very useful and important. He considers that there are three factors in the causation of almost every attack ; (1,) The nervous constitution ; (2,) The local irritabilty ; (3,) The local exciting cause. Is the latter usually pollen? He thinks it is, but acting mainly in virtue of its physical characters, and he believes that any other agent capable of calling into action the parts concerned in the mucous membrane of the nose may be equally efficient. Next in importance to removing the cause and strengthening weakly constitutions by tonics he places local treatment. Of this he mentions three plans ;—(1,) To *allay* the irritability of the mucous membrane. He has found the application of **Cocaine Solution** (5 to 15 per cent.) by means of a camel hair brush very useful for this purpose ; (2,) To *exhaust* the irritability of the membrane. To this end he applies locally a mixture composed of **Glycerine of Carbolic Acid** 1 oz., **Hydrochlorate of Quinine** 1 drachm, and the two-thousandth part of **Perchloride of Mercury**, prepared by heat. The nostrils being first cleansed with a douche of warm water containing **Boro-glyceride**

(1 oz. to the pint), a laryngeal brush is filled with the carbolic mixture, pushed gently but firmly into each nostril, carried as high as possible without injury, moved about in the upper part of the nose, and withdrawn. It is next pushed along the floor of the nostril into the pharynx and withdrawn; and sometimes we must brush the posterior surface of the soft palate and adjacent parts through the mouth. The immediate effects in all cases are disagreeable, and last from half an hour to half a day—a little blood-stained mucus, a frontal headache, a trivial cough, occasionally all the local phenomena of a paroxysm of hay-fever. Patients should be warned of these effects and assured that they will be brief and devoid of danger. Usually two or three applications are necessary to ensure a full chance of success. The length of the interval between the applications must be determined by the character of the immediate effects. If these are mild, the applications may be renewed on alternate days; but if severe, at least three days should elapse between succeeding applications. Of this plan it may be remarked that its severity points it out as suitable chiefly in very obstinate cases, but in others, milder applications will be found quite as useful, and much less objectionable. (3,) The remaining plan is to remove, modify, or destroy by caustic or by cautery, such portions of the nasal mucous membrane as are believed to be the seat of pathogenic irritability. Sir Andrew Clark admits that this plan has met with success in the hands of others, but he has not himself employed it.

Dr. John Roe. "Boston Medical and Surgical Journal," June 9th, 1887; Dr. De Havilland Hall. "Lancet," November 13th, 1886; Sir Andrew Clark. "The Cavendish Lecture."

HEART (Special Diseases of).

B. Arcedeckne Duncan, M.D., M.R.C.P., &c.

Prognosis.—In the "British Medical Journal," July, 1886, Sir Dyce Duckworth draws attention in a very interesting paper to the prognosis of cases of rheumatic cardiac disease. To deduce trustworthy prognosis, the clinical facts must be accurate. In his notes of cardiac cases he finds many in which no serious symptoms occurred till the lapse of many years. This is common after rheumatic valvulitis. In some instances the lesion is mitral and of obstructive character, and is often long unaccompanied with serious symptoms. However opinions differ on this point, patients only come to hospitals when the grave symptoms set in. In most of his cases the rheumatic attack had occurred in early life. In mitral stenosis he thinks the valvular mischief is often truly rheumatic, the result of a chronic form

which leads to a gradual maiming of the valve. The prognosis of mitral reflux, and of mitral stenosis, in five cases of each, varies in respect of specific lesions. It is better, in the former, though he does not regard the latter, in well-to-do patients, in the seared decade of life, with very fearful forebodings.

When reflux co-exists with obstruction the prognosis is much graver. The average age at death in nineteen cases of Dr. Sansom was 35 years; and in forty-two cases by Hayden 37 to 52 years. Sir Andrew Clark reports a case of mitral reflux who was condemned to die in six months, who, forty years after was enjoying good health; and also another case where the patient was living forty-two years after condemnation at the age of 84 years. Dr. Semple has recorded a case of mitral disease and aortic valvulitis, after five attacks of rheumatic fever in whom the disease existed for thirty years; she is now in good health. Dr. Murchison records a case of mitral and aortic disease in a man 45 years of age, who had rheumatism eight years previously, and went on without any symptoms till within six months of his death from cardiac failure, rupture of the right ventricle and of the aortic valve. Sir D. Duckworth says he has a case under his care who has had mitral reflux for ten years.

Dr. King Chambers has recorded cases of valvular disease of long-standing of rheumatic origin. The histories were taken from private practice and insurance examinations. The cases showed evidence of great prolongation of life from the time of the rheumatic attack, the periods varying from one to fifty-seven years. Dr. Walsh has known cases observed by himself from the first, of mitral reflux, remain functually innocuous for upwards of twenty years.

Valvular Disease without serious symptoms.—Sir Andrew Clark, in the "Brit. Med. Journal," 1887, extracts from clinical histories of 684 cases, in which there existed well-marked chronic valvular disease of the heart, and not interfering with the patient's health. Concerning the diseases for which the patients were receiving treatment, it appears that nearly one-half were affections of the digestive system, and about one-fifth diseases of the nervous system. The author relates a number of interesting cases, showing that the evidences of the gravest cardiac lesions could co-exist with excellent health. Many of the patients had been told by physicians in prior attendances that they could live but a short time; to others the strictest rules of diet and exercise were given, with the result that health and happiness suffered greatly. All these cases Sir A. Clark recommended to return to the ordinary hygienic regime necessary for the physiological conditions of life. He

warns us, however, that this is only suitable to chronic and stationary cases; when the heart is irritable, irregular, or frequent, and when the murmurs vary in character and intensity, or when there is any feeble action, patients must be kept at rest, and the slightest diet administered; any other course is unsafe.

The author next reports several cases showing that well-established cardiac lesions having lasted several years, and due to inflammation of the valves, may, in later years entirely disappear. This may be observed in the case of the mitral bruit, often heard in chorea, and dependent on organic changes. These murmurs of chorea, in fact, usually disappear eight or nine years after the attack. The same disappearance of all evidence of disease can often be observed years after a rheumatic endocarditis had produced a loud systolic murmur. Such recoveries are often seen in the young, yet they sometimes take place in the old; and in substantiation of this fact, the author quotes cases. Even well-marked valvular defects of a degenerative nature, may, in rare cases, disappear. He says there must be *differentials* between the histories, habits, surroundings, occupations, etc., of those who suffer and die of heart disease, and of those who are not in the least incommoded by its presence.

According to Sir A. Clark, the factors necessary in mitral disease for the exemption from unpleasant cardiac symptoms, and for the continuance in the duties and enjoyment of life are as follows: (1,) Good general health; (2,) Just habits of living; (3,) No exceptional liability to rheumatic or catarrhal affections; (4,) Origin of the valvular lesion independently of degeneration; (5,) Existence of the valvular lesion without change for over three years; (6,) Sound ventricles, with moderate frequency and general regularity of action; (7,) Sound arteries, with a normal amount of blood and tension in the smaller vessels; (8,) Free course of blood through the cervical vein; (9,) Freedom from pulmonary, hepatic, and renal congestion. The prognosis in aortic disease is not so favourable even under the same conditions.

W. W. E. Green, in "B.M. Journal," March 19, relates a case, which he says may be interesting in connection with the above paper of Sir A. Clark, where a medical man, who will soon be 94 years of age, has had mitral systolic murmur during the past thirty-one years; he has had an intermittent pulse for fifty years. He had rheumatic fever when twenty years of age, and before his marriage Sir A. Cooper told his friends that if he fainted he might never rally. Belonging to the old school he was regularly bled twice a year.

Mr. Green says, in the course of his practice he has seen cases of

valvular mischief of many years' standing, where compensation has been so thoroughly established as to cause no inconvenience to the patient.

The "New York Medical Journal," of March, 1887, in reviewing Sir Andrew Clark's papers on "Heart Disease," says it calls up some interesting questions as to the treatment of cardiac affections. The cases had run a favourable course for years, independent of any treatment, or diet or mode of life. The inference drawn is that a patient suffering from heart disease of that character had better be left alone. A close analysis of the paper reveals an instructive lesson, and furnishes a valuable clue to the management of these affections. All Sir A. Clark's patients had been in fair circumstances, had no worry, they used tea, coffee, alcohol, and tobacco in moderation. The ideal life that the author depicts of a person suffering from valvular disease may seem impracticable and unnecessary in the light of his own case. But every such person can and should be enjoined to take but small quantities of the articles mentioned, and especially to be cautious of tobacco. Recent observations have shown that the immoderate and long-combined use of tobacco may of itself bring about organic changes in the muscular substance of the heart. To Oertel, of Munich, must the credit be given of having dispelled the fear of allowing patients with valvular lesions a moderate degree of exercise. It is a valuable therapeutical agent but requires strictly watching; and the rules he lays down should be carried out under medical supervision. In general practice, unless the patient undergoes very arduous physical labours, he would make no alteration in the exertion necessary in his employment. But it must be well understood that not every person with a damaged heart may go about his customary work and follow his ordinary habits with impunity. In some cases such a course would be very injudicious; and life might terminate abruptly. When, according to Sir A. Clark, the heart is irritable, intermitting or irregular, when the murmurs vary in character, and when there is a suspicion that changes have occurred in the interior of the organ, it is necessary that the patient be kept at rest, and on the lightest food.

General Treatment of Diseases of.—The general management of sufferers from organic heart disease is likely to undergo some modifications, based on the views of the late Dr. Stokes, but to which very little attention has been paid in this country until recently. The modes of treatment adopted by Oertel and Schott, and the success which have attended them, proves that the severe restrictions imposed upon the sufferers from organic disease are not always of advantage, and that

positive good may be frequently effected by systematic exercise and the use of baths. We fully described these methods in the "Medical Annual," 1887, p. 231. The experience obtained by Schott gives importance to the views recently advanced by him in respect to the pathology of heart disease.

He says: "*Insufficiency of heart muscle* may be *absolute* or *relative*. In *absolute* insufficiency there is no obstruction to the circulation, but diminution of muscular power. "Fatty heart" can be cured without loss of weight, but the treatment of obesity may act injuriously by affecting general nutrition.

In *relative* insufficiency there is obstruction to the circulation; the heart muscle preserves its normal power.

Of *dilatation* he makes two classes. (1,) That which accompanies valvular lesions. It is exemplified in the left ventricle in aortic and mitral disease. The second form is disease of the muscle substance, and might be named "dilatation of engorgement." It is well represented by dilatation of the right heart, following valvular disease of the left side; and that of the left heart due to renal disease. He says: after a few minutes of proper gymnastic exercise the percussion boundaries of the heart become lessened, but various causes may increase the dilatation, as shown by cardiac dullness.

Of *cardiac murmurs* he says: In many cases which were judged to be organic, they disappear. The sudden appearance and disappearance of murmurs are often observed, and a murmur may be made to vanish in a few minutes by light gymnastics. The author thinks that a recent mitral insufficiency, due to endocarditis, may, in rare cases, really heal, but the author doubts whether true aortic insufficiency is ever curable.

In *peripheral passive congestion and hydrops* he says: Diminution of the amount of urine is a result of heart disease, but need not amount to dropsy. But when a large quantity of fluid is brought into the system by thirst, hydrops appear. The progress of the circulatory disturbance is aided by the passive hyperæmia of the kidneys, and we may find a clinical picture resembling that of contracted kidney. Increase in the size of the liver occurs early before albuminuria appears. This may be diminished by suitable gymnastics. Congestion of the internal organs is often relieved by œdema of the subcutaneous tissues. When engorgement becomes extreme, an element of inflammation is added. The pulmonary hyperæmia becomes splenization; the hydrothorax exhibits friction sounds, and erysipelas may appear.

M. Frey has also contributed a paper ("D. Archiv. f. Klin. Med."

April, 1887), on "*The value of Turkish Baths* in the *diseases of the circulation.*" First he determines the normal effects of such baths by observations on himself with regard to their influence on the pulse, arterial tension, respiratory capacity, renal excretion, and bodily weight. He finds that the quantity of blood in the body is lessened by the free excretion which takes place in the skin and lungs. The body weight is reduced; and the work of the heart is lightened, and its substance better nourished by the improved quality of the blood supplied to it. The peripheral arterioles of the body become dilated and filled with blood, effecting a corresponding emptying of the vessels of the internal organs. Albuminous bodies, and fat are rapidly broken up, which explains the loss of weight. As the result of alternate warm and cold douching, the vaso-motor energy of the vessels is increased, rendering them more capable of resisting any strain thrown upon them.

In these physiological notes he explains the good effects of the Turkish baths in disease. Thus in *obesity*, when the baths are extremely well borne, the diminution of weight is well illustrated. This precaution is necessary, and Dr. A. Duncan holds the same opinion—*that the cold douche ought not to be used in such cases, as the sudden shock acting on a heart loaded with fat, may prove dangerous.* The sweating stage ought never to be continued *after the pulse rises above* 100.

The baths are well borne in cases of *aortic and mitral disease* dependent upon rheumatic affection. The effect is most marked in cases where compensation is disturbed, with anasarca of limbs, failure in secretion of urine, and dilated right heart. The pulse generally falls after the first ten or fifteen minutes' influence of the bath, remaining between 90 and 100 when perspiration commences; it becomes softer, less tense, more dicrotic in character; visible arteries, such as the temporal, are seen to distend, and respiration becomes freer, deeper, and slower. In the after treatments the cold douche should be *first avoided*, and a douche at the temperature of the body used. The bath can be repeated daily or alternately, according to the strength of the patient. Whilst improvement goes on, colder douches may be had, then finally the coldest of all may be freely used.

In cases of *Chronic Bright's Disease*, where hypertrophy of the left ventricle exists, œdema of the legs, increase in albumen, and some failure in the secretion of urine, the baths prove useful. It is desirable to be cautious in the use of the cold douche.

The Turkish bath is not well borne by *Emphysematous* patients. The vapour bath is more efficacious and beneficial.

In all cases characterised by a disturbed circulation, dependent upon weakness, œdema, paralysis, rheumatism, etc., the Turkish bath is of great value ; under such circumstances the baths improve nutrition, and raise the general vaso-motor tone.

At the sixth German congress for internal medicine, held at Wiesbaden, in April, 1887, Professor Liebenstein read a paper on muscular exercise or rest for heart disease. He said that most practitioners still hold out firmly against a more active treatment of chronic heart disease, through exercise of the cardiac muscle, and insisted that, above all things, all acute cases, as well as those where an over-distention of the heart had occurred, must be handled with care. Quiet does not, however, improve the chances of the patient, whilst reasonable nourishment, combined with well-conducted exercise, strengthens the myo-cardium. In all chronic cases we should advance from rest and care to the endeavour to strengthen the heart-muscle by exercise. On the ground of large experience, Dr. Liebenstien is confident that active but careful movements, with quiet respiration, conduce to strengthening and slowing the action of the heart. At the same time he warned his listeners against over-exertion, and said that each performance should be followed by a sufficient period of repose. Those cases of failure, however, in which there is no compensation, or in which it has been lost, must first pass through a period of quiet and forbearance, and then by well-measured work we may commence to improve the action of the heart. He also advised the Oertel (mountain-climbing) cure for chlorotics ; but above all things, it must be conducted with the greatest caution, and its execution must not be left to the patient.

Dr. Alfred L. Loomis, of New York, has communicated a most instructive and important paper to the "American Climatological Association," "on the effects of high altitudes on cardiac diseases." This paper may be usefully studied by the physician, who may have patients either setting out on a tour of mountain-climbing, or balloon ascending.

The author opens with the narratives of six cases of various forms of cardiac disease, in which death was preceded by rapid change from lower to higher altitudes. The method of death assimilated that observed in ordinary cases of mitral disease.

The chemical and physical conditions of the atmosphere at varying heights are referred to, and *rarefaction* of the atmosphere is the conclusion arrived at as the only physical property in the question.

On ascending a height, a point is reached where the normal balance

between demand and supply is disturbed. The tissues call upon the heart for a greater supply of oxygenated blood, and increased cardiac rhythm is the result. This is insufficient to satisfy the demand, as the heart depends upon the lungs for a proper supply of arterialized blood, and they are consequently called into increased action. To produce tension on the cardiac muscle a very high altitude is not required. Aeronauts and mountain travellers often on reaching certain altitudes feel certain symptoms of venous congestion of the head and face, their lips become blue, skin purple, there is nausea, epistaxis, and cardiac palpitation. The lungs become deficient of oxygen, and the blood contains an amount of carbon dioxide approaching that of asphyxia.

The two important factors which lead to permanent cardiac insufficiency are—1st, the condition of pulmonary distribution from atmospheric rarefactions, and 2nd, the resultant condition of the circulating blood; in the first, the terminations of the vagus are excited by the distension of the lungs. By the excitation of these different fibres, the cardiac as well as the inspiratory ganglia of the medulla are paralyzed, the inhibitory control being lost, the diastolic intervals shortened, and the rhythm increased, but the amount of work done is not in proportion to the display of cardiac energy. The change of the blood, which acts as an important factor in producing cardiac insufficiency, is its want of oxygen. Dr. A. Duncan is also of opinion that—

"The risks which one, with slight cardiac insufficiency runs, by passing from a low to a high altitude quickly, are very great, and if the cardiac insufficiency is great, such changes in altitude become dangerous. The etiology of cardiac dilatation is a subject which, at the present time, is greatly interesting to those who are studying cardiac disease. Forcible dilatation of the cardiac wall, when it is in a flaccid state, is far more likely to produce dilatation, than forcible dilatation, when the wall is contracted. Experiment has demonstrated that, during their contraction, the walls of the heart are able to withstand high internal pressure without their cavities being dilated. If then, where cardiac enervation exists, from any cause, the excessive relaxation of the ventricular muscle which attends it leads to over-distention of the ventricular cavities, and this may result in permanent dilatation depending in a greater or less degree on the condition of the cardiac walls." May not this be the explanation of those sudden ventricular dilatations stated, some of which must be classed under the head of what writers call dilatation of the ventricles without any discoverable cause?

In endeavouring to determine the muscular powers of the heart, in cardiac disease, it is important to study, from a clinical stand-point, the factors which contribute to the first sound of the heart. While physiologists doubt the existence of a muscular element on theoretical grounds, I am satisfied that, synchronously with the beginning of the ventricular systole, an element of cardiac resonance is projected that cannot be referred either to the apex-beats, the friction of the blood current, or to the closure of the auriculo-ventricular valves.

Whether we understand every thing of cardiac muscular contraction as yet is questionable, and we are obliged to hear the sound without knowing just how it is produced. Clinically, I know that an impairment of the integrity of the muscular structure of the heart walls results in just such a modification of the first sound, as one would expect who had listened to the organ under the conditions just mentioned. The absence of this element in the first sound has come to indicate to me a failure in the integrity of the heart powers, which would urge me to caution such a one from rapidly passing from a low to a high altitude. It is also unsafe to make such changes by those whose cardiac rhythm is greatly disturbed by excitement or rapidly ascending a flight of stairs. ("New York Med. Journal," June 12, 1886).

The Therapeutic Agents used in Heart Disease were very fully discussed in our last issue "Medical Annual," 1887, p. 233, and recent information respecting these remedies will be found in the "Dictionary of New Remedies," the index of which should be referred to.

In the "Lancet," March, 1886, Dr. A. Ernest Sansom, of the London Hospital, in a communication of a very practical character, discusses the treatment of mitral regurgitation by a **Citrate of Caffeine.** It is a stimulant of the medulla and cardiac centres, to quicken the pulse and respiration, and raises the blood pressure in moderate doses. It sometimes acts as a diuretic. *Professor Jaccoud*, he says, describes the effects of **Caffeine**, "as identical with those of **Digitalis**; slowing the heart pulsations, augmenting its force of contraction; diuresis; no nauseous effects; no cumulative action. The drug does not need incessant watchfulness. It can be employed in cardiac cases where the kidneys are affected."

Dr. Sansom then refers to its mode of administration, and then he turns to the evidence of cases under his own care. They were cases of great gravity, in which the ordinary treatment had failed. They were eight cases in which the effects were very striking. On the two first cases it acted very beneficially, and they left the hospital feeling well. Cases

three and four and six and eight died. From his observations on these cases he concludes that **Caffeine** in cases of mitral regurgitation is a valuable agent where failure of compensation has occurred. That it is a powerful diuretic, and valuable where dropsy is manifesting itself. It tends to increase the force of the heart, calms respiration, and reduces temperature, but it fails sometimes to be of benefit. It fails in pericarditis.

Dr. Wm. Budd, of Exeter, narrates two cases of heart disease where digitalis, etc., appeared useless. He gave **Strophanthus** as a heart tonic and diuretic, and he remarks that the cases showed undoubted effect of strophanthus after the failure of digitalis, etc. Its advantages over this drug are that no cumulative effect was observed, nor was there any gastro-intestinal disturbance ; in cases where disturbance of the circulation when the blood pressure is low, strophanthus is capable of producing marked diuretic effect. ("Lancet," Sept. 10, 1887.)

The "Philadelphia Medical Times" of May, 1887, publishes a case of *Dilated Heart* treated with **Adonidine.** A teamster, aged 23, was admitted into the hospital suffering from mitral organic lesion with stenosis of the orifice, associated with cardiac dilatation and slight hypertrophy, pulse feeble, irregular, and difficult to count, about 80 per minute. He took infusion of **Digitalis** with some good results, the dropsy disappeared, and breathing relieved ; the heart's action more regular, increasing in force, but not to the extent desired. The digitalis asked chiefly diuretically, and expended itself on the dropsy, and acted very slightly upon the heart. After several days, Dr. Da Costa, who discussed the case in a clinical lecture, deemed that a pure heart-tonic would be desirable, and gave the man adonidine, one tenth of a grain three times a day at first, then five or six times in the twenty-four hours. The effect was very marked upon the heart, strikingly good, and the temperature rose with the administration of the adonidine. The low temperature, whilst he was taking digitalis, ceased on taking the new remedy. This remedy increased the strength and action of the heart ; it has no diuretic action.

The case points out a comparison between digitalis and the new alkaloid. This agent, he states, whilst its power as a heart tonic are not inferior to digitalis, is free from the disturbing action of the latter. Dr. Da Costa having used adonidine for some time, considers it a valuable addition to our therapeutics of heart affections. This drug, he says, will never supersede digitalis in the treatment of cardiac dropsy, from its want of diuretic action. In a case of weak and dis-

ordered circulation, the nearer it approaches a condition of dilated heart, the more benefit is derived from the adonidine. In cases of weak digestion with weak heart, it is especially suitable.

Dr. Huchard reminds how a graver lesion, aortic aneurism, is made to disappear under the **Iodine** treatment, as Bovilland first proved, and confirmed by Potani, Paul, and Burquoy, of Tera, and Craig, Balfour, and Bramwell, of England.

M. Germain See first employed **Iodines** for cardiac hypertrophy, he says, "**Iodide of Potassium** is a most valuable cardiac medicine, and is effective in dyspnœa, it modifies the muscular lesions, notably myocarditis, and at the same time increases the contractile energy of the vessels, facilitates respiration, and maintains the tonicity of the heart."

Dr. Huchard states that **Iodine** acts on the vessels in a similar way, and to this power he ascribes its curative effects in sclerosis of the arteries, aortitis, angina pectoris, etc., but there must be a prolonged administration of it, even for some years.

In an elaborate memoir on "the *curability of arterial cardiopathy*," Dr. Huchard ("Bul'. Gen. de Therap.") has passed in review the methods of treatment most effective. In the asystolic condition **Digitalis** is the most useful, but in the presystolic period, the best remedy is the **Iodine**, from 15 to 40 grains daily, over a period of from one to four years. Under its use the arterial disturbance lessens and disappears, whether the lesion is myocarditis, valvular disease, aortitis, etc.

Angina Pectoris.—The symptoms and physical signs of those who frequently come under our care with this affection are marked by paroxysms of acute pericardial pain radiating from the heart to the left side of the chest, passing up the side of the neck and down the left arm, sometimes it radiates up to the right shoulder and down the arm—a terrible feeling of impending death strikes the patient with terror. The chest feels compressed as if it were in a vice, the lips are pale, and profuse cold perspiration comes over the face, the patient dreads taking an inspiration, and in most cases the features are expressive of great suffering, fear and collapse.

The condition of the pulse is variable, small, very quick and hard, and arterial blood pressure is very marked in certain cases—sometimes the pulse is irregular—and in other cases the heart's action is said to be nearly normal, and the pulse tranquil, in others the pulse has been found to be slower than normal during the attack.

The respirations are sometimes increased in frequency, and as

a rule the movements are more shallow than in health, in some cases dyspnœa is observed. Vomiting and vertigo are not uncommon, and spasmodic twitchings and even convulsions occur.

The paroxysms are indefinite as to time, and as the attack passes off, eructations of flatulence from the stomach often arise, frequently followed by a copious evacuation of pale limpid urine.

The patient becomes exhausted after a severe attack, and looks sadly depressed, and the condition of prostration bears testimony to the severe nature of the ordeal he has undergone. When the pain has subsided a feeling of numbness is experienced in the affected parts. During the attack the action of the heart will be found as a rule to be quickened, and the sounds weaker than in health, though, as before stated, in some cases the action is quite normal. When there are valvular lesions, and other organic changes, the usual indications of those lesions will be observed.

After convalescence it is essential to make careful examinations of the head, etc., and any condition suggestive of any degenerative change in the vascular system, and the condition of the urine, etc.

In functional angina there are scarcely any indications of cardiac, aortic, or vascular disease.

The frequency of the paroxysms vary. Sometimes there is no return of the attack, at other times it comes on frequently, and occasionally years intervene. The slightest exertion produces them in some instances, and their severity generally increases as the case progresses.

When one has no opportunity of witnessing the paroxysms it is extremely difficult to form an opinion of the case. In grave cases sometimes the pain is not always severe, but when it is so, it is identical with the organic form, and attention should be directed to the condition of the heart and vascular system, age and sex of the patient, and the severity of the symptoms.

The prognosis of angina pectoris, both organic and functional, must be loooked upon with great gravity, as patients not infrequently die in the spasmodic paroxysms. We must base our opinion upon the state of the heart and severity of the attacks, and the ability of the patient carrying out the treatment desired. Frequently there is a tendency of recurring attacks and they become more severe on repetition, and may at any time prove immediately fatal. On the other hand, where the vascular and cardiac disease is not serious, the patient may live for years. If there is any "degenerative" arterial changes the prognosis should be most guarded.

At a meeting of the Société Médicale des Hôpitaux, M. Edgar Hirtz made a communication on a case of angina pectoris. The patient was a man of thirty-six, and an inveterate smoker. For three months he had suffered from irregular attacks, which presented all the characters of angina pectoris. The heart, on examination, showed nothing abnormal, beyond a slight metallic ring in the second sound at the base. The pulse was regular, and the radial arteries supple. The man had three attacks whilst at the hospital, the last was of ten minutes duration and terminated fatally. A *post mortem* revealed normal heart, healthy myocardium; also cardiac plexus and valves intact, endocardium smooth and supple. At the entrance of the aorta there were acute patches of arteritis, which reached to the commencement of the large arterial trunks. No traces of atheroma nor indurated patches were detected. Around the starting-point of the intercostal arteries, there were a few swollen pink patches. The coronary arteries were intact, no traces of atheroma or obliteration. Histological examination of the muscles and nerves of the cardiac plexus revealed no deterioration of the myocardium, nor of the nerve tubes. M. Hirtz considered that this case demonstrates the contested truth of the existence of primitive acute aortitis, independent of anterior atheroma. The coronary arteries were found to be completely healthy in a patient who succumbed to true angina pectoris. Iodide of sodium was administered without any benefit.

In the treatment of this affection the paroxysms must be first allayed, then to prevent their recurrence, our efforts must be directed to remedy or ameliorate the conditions on which such a state depends. **Nitrite of Amyl** inhalations relieve the arterial tension, but this drug is not a specific. Three drops are recommended to be put on a handkerchief and to be inhaled during the spasm. To those who have frequent attacks, it is recommended that they should carry about with them some of this, and inhale it when a paroxysm is impending. **Nitro-Glycerine** in doses of $\frac{1}{100}$ of a grain is also very useful in allaying and shortening the attack, and also lessening its severity. **Ether, Brandy, Ammonia** or any diffusible stimulant may be administered.

Local application is recommended by Prof. Peter. We must prevent by all means in our power the recurrence of the paroxysms by avoiding those causes which produce it; and for this purpose equal parts of the **Linimentum Chloroformi** and **Linimentum Belladonnæ, P.B.**, applied on a large warm linseed meal poultice, will be found very useful; also, to raise the general state of health by carefully treating any organic

lesion of the heart or vessels. The gravity of these affections is so apparent to patients that they know and feel that a recurrence may prove fatal, so they avoid any excitement that would increase blood pressure. All cases of mental excitement or depression must be avoided as much as possible. The diet should be easily digestible, nutritious, and moderate, avoiding those things that create distention and flatulence. **Quinine**, **Iodide of Potassium** and **Arsenic** may be given with advantage. The **Faradic Current** has been highly spoken of, but more extended experience is required to stamp it as an effective remedy in organic angina pectoris, but in functional forms it may be useful, but the drug, which in the author's hands has the most successful in properly chosen cases has been a "tabloid" made by Messrs. Burroughs and Welcome, composed of **Nitro-Glycerine** and **Strophanthus Hispidus** in various degrees of strength, to suit the age and condition of disease.

Pseudo-Angina has formed the subject of a recent paper by M. Le Clerc. The first case of the kind was recorded in 1812 by Millot, but many since have been observed by Bertraud, Balfour, and others.

Hysterical Angina is met with principally, but not exclusively in women, generally before middle age. The attacks are longer, more frequent, and more severe than in angina of organic origin.

They are remarkable by their onset, which is sometimes central, sometimes peripheral. The differential diagnosis is based on the nature and seat of the pain, and the presence of some sort of aura, by the multiplicity and variability of the irridictions, which are more eccentric, and present a greater range.

The attacks are more or less periodical, occurring oftener by night than by day, and are provoked by emotions, dreams, etc., seldom by a physical effort. Their termination is marked by a phenomena, essentially hysterical in their nature. The past history of the patient is of importance ; the prognosis is favourable as regards its termination and cure.

Ulcerative Endocarditis, has formed the subject of several recent communications. Dr. Pollock records the case of a man, 27 years of age, who for eight days suffered from dyspnœa, cough, etc. He was pale, eyes sunken, and worked the alæ-nasi ; no dulness on percussion, expansion not diminished, no râles or bronchial breathing ; no hypertrophy of heart, first sound at apex rough, aortic sound normal, urine S.G. 1020. He was ordered **Citrate of Potash**, **Tincture Digitalis**, **Ether** and **Ammonia**, **Quinine** and **Brandy**, but became weaker, and died after eight days' treatment. The *post mortem* showed an excess of fluid in the pericardium. On the ventricular surface of the

anterior cusp of the aortic valve was a mass of coagulated fibrin an inch in length. On the adjoining surface of the next valve to the left was a clean cut hole $\frac{1}{3}$th of an inch in diameter, with thickened edges. The aortic valves acted effectually. The remaining cusp of the aortic valve was thickened at its free edge, and had a superficial ulcer at its posterior part. Dr. Pollock remarked that this was a very acute case. Ulcerative endocarditis with pyæmic symptoms has several phases. It sometimes resembles typhoid fever, and is accompanied with diarrhœa. Throughout there was no cardiac bruit, notwithstanding the diseased state of the aortic valve, owing to the fact that the aortic valves were competent.

In a case recorded by Wolcott, the pathological changes exhibited at the autopsy were as follows:—The lower half of right lung was bound to costal pleura by adhesions, right pleural cavity contained pent fluid, both lungs œdamatous, three ounces fluid in pericardial sac. Heart enlarged, walls hypertrophied, and cavities dilated. The ventricular surfaces of cusps of the aortic valve were the seat of ulceration. In opening, the aortic orifice divided the largest ulcer, the size of a sixpence, of a dirty greyish colour. The second ulcer was at the junction of the posterior right cusps. There were several nodules softened at the apex with beginning ulceration. There were also evidences of inflammation of the aorta extending about an inch and a half from the aortic orifice.

Gonorrhœal Endocarditis is a disease of such rarity, and as many able authorities deny its existence, and others report such cases, the two following cases by M. Veldon may prove of interest ("Mürich Med. Wochensch.," 1887.) A man at thirty-one acquired gonorrhœa on March 22, discharge commenced four days later, treated by aperients, alkalies, and injections. April 18th had rigors, dyspnœa, and thoracic tension, pulse 86, skin dry, no pains in joints, temperature 38·4° C. Breath sounds normal, breathing quick, apex-beat well marked, cardiac dullness normal. A blowing systolic murmur, loudest at apex, but heard over base, second pulmonary sound not increased in volume, but "distinctly accentuated," a slight thrill over apex, for three days the symptoms remained the same, temperature rising in evening to 39° C, morning remission slight. April 24th, no fever, apex murmur barely heard, apex-beat no longer intensified. Cardiac dullness normal. May 12, patient well and resumed work.

Case 2. Student, twenty-five years of age, suffering from palpitation and dyspnœa, marked signs of mitral regurgitation with compensatory hypertrophy. Four months ago had gonorrhœa, treated with

injections and unguents. After three weeks had "inflammation of chest and heart" as his medical attendant told him. Had fever, delirium, and headache, and kept his bed five weeks, was cupped over heart, took digitalis, and had ice applications. Before this, had always good health, only had whooping cough when a child.

Cardiac Dilatation.—Dr. G. N. Pitt, in the "Brit. Med. Journal," Nov., 1886, points out that, according to the observations of Beurke, the annual increase in the size of the heart between seven and fourteen years of age is only 8 per cent, whilst during the development of puberty the increase various between 80 and 100 per cent. When the changes of puberty are accomplished in one year the heart doubles in size; when the change is spread over two years the annual growth is 50 per cent, when over five years 22 per cent., so that in each case doubling of the size takes place. The fact of a heart growing three times as much in one year as in the preceding year forms an important change. When such a task is demanded of an organ it is only in the minority that it can take place in one year. Clinical experience shows that the great demands made at this period on the heart may lead to cardiac dilatation, and to a want of cardiac energy to meet emergencies in those who have grown very rapidly. The symptoms of cardiac weakness are usually not met with in those in whom puberty has developed rapidly; but in children in whom it is retarded. As a case of the kind Dr. Pitt cites that of a young lady of 16 years, who had grown three inches during the year, and was above the average height. She easily became short of breath, and after playing tennis, suffered from severe dyspnœa for the day, with cardiac discomfort and pain. Suffered from shortness of breath at night so severe at times that it prevented her lying down. She also suffered from palpitation, languor, partial syncope, and anæmia. Menstruation came on six months previously, scantily, the cardiac impulse was found diffused over an area of an inch and a half, extending in the 5th interspace to the nipple line, slight epigastric pulsation. The first sound at the apex was prolonged, the second over the pulmonary area accentuated, and the first over the aortic area weaker than normal. The treatment slight, regular exercise, enjoining as a main point to lie down for two hours in the middle of the day, to allow the heart an opportunity of recouping by diminishing its work, **Arsenic** and **Iron** were given. The result being that no more attacks of dyspnœa, and at the end of six months the other symptoms had disappeared.

Dr. Graham Steel, of the Manchester Royal Infirmary, has pub-

lished in "Med. Chronicle," March, 1887, a valuable paper on primary dilatation of the heart. Whilst arising from weakness of the ventricular wall, this form of cardiac enlargement he believes to be preceded by mitral regurgitation. Impairment of the contractile power of the wall of the ventricle renders the valves incompetent, blood is thrown backwards into the auricle with each systole, but, during diastole, the blood thus regurgitated is returned to the ventricle along with the delivery of the normal amount of blood. Although the ultimate prognosis is grave, these cases readily respond to treatment in the early stages, and symptoms and murmurs may entirely disappear, the enlargement of the heart alone remaining. If the patient could be placed in favourable circumstances life may be prolonged for many years. It is in the early stages that much good can be done in primary dilatation of the heart. Rest and the recumbent position, without which all other treatment will fail, and it alone will remove the symptoms in many cases. When there is dropsy **Digitalis** is the great remedy. Bronchitis is generally present, and a useful prescription is **Squills**, **Digitalis**, and **Senega**, three times a day. Diet is of importance; the stomach should never be over-burdened. When the dropsy and dyspnœa have passed off, **Iron** and **Strychnine** should be given instead of digitalis, and the patient allowed mild exercise: bowels should be kept regular. Convalescence often takes place with great rapidity, but the patient should not be allowed to speedily resume his ordinary work.

Mitral Stenosis.—Dr. G. N. Pitt, assistant physician and pathologist to Guy's Hospital, in a paper to the "Brit. Med. Journal" of July 16, 1887, narrates some interesting cases where mitral stenosis is associated with granular disease of kidneys. His attention was first drawn to it about four years ago. The symptoms observed in these cases are a loud first and a weak second sound at the apex, accompanied by a systolic *bruit*. The second pulmonary sound is accentuated. He has searched the records of Guy's *post mortem* room for the preceding 10 years, and gives some very interesting statistics of these states, which are very instructive, and to which the reader is referred. He also gives some pertinent remarks upon them.

Fatty Tumour of Heart.—At the Pathological Society, January 18, 1887, Dr. Handford showed the specimen of a fatty tumour of the heart from a woman aged 76. The patient was suffering from melancholia. The heart sounds were clear, but faint. She died suddenly. No excess of fat was found anywhere except on the surface of the heart. Right auricle and ventricle full of red clot; left auricle and

ventricle contracted and empty, substance pale yellow and greasy to the touch. In the inter-auricular septum was an oval tumour, the size of a pigeon's egg, of a fatty nature. These tumours, he said, were very rare; he had communicated with 19 curators of museums of pathology, and had only heard of three doubtful specimens of fatty tumour of the heart.

Anæmic Disease of the Heart.—Evidence is being furnished to show that amongst the results of anæmia, an amount of damage is done to the mitral and aortic valves. The mischief occurring through the dilative changes, so common in the left ventricle in grave cases of anæmia, undue tension in the valves leads to sclerotic change.

Dr. Goodhart, in "Lancet," March, 1880, has well studied this subject. The pulse is of high tension in anæmia, but hardly as yet recognized, and if the blood-state be not remedied, the results of intra-arterial pressure fall upon the valves most involved. Early and active treatment is imperative, and he finds it far too common to treat anæmia inadequately. Chalybeates are played with in a trifling manner, and much dangerous delay at recovery, results. Dr. G. W. Balfour has called attention to this point.

The unreliability of the well-known "*jugular hum*" as a sign of *anæmia*, which was pointed out by Weil, and whose objectious have been disputed by Guttman, has been again proved by Dr. Reinhold Apetz upon the results of the auscultation of 660 patients, of whom 115 were anæmic, 161 barely so, and 384 not anæmic. The murmur was detected in the proportion of 51 per cent. of the first class, 46 per cent. of the second, and 39 per cent. of the third. The analysis closely corresponds to Weils, and Dr. Apetz arrives at the following conclusions :—1st. That venous murmurs in the internal jugular vein depend in the first place upon the age of the affected person, the murmurs becoming less frequent with advancing age. 2nd. That venous murmurs detected by turning the head to the other side are of no value in the diagnosis of anæmia, but have only a physiological importance. 3rd. That some pathological importance specially belongs to the true murmurs detectable where the head is kept straight, and where they occur loud in individuals of middle age, yet they are too insignificant to be of value in the diagnosis of anæmia. 4th. Under no conditions does the venous murmur have any special diagnostic value for chlorosis and other anæmic states.

HEART (Neurosal Affections of). *J. Milner Fothergill, M.D.*

Probably there is no malady that causes the general practitioner more trouble than a nervous disturbance of the heart. He feels fairly

at home and familiar with the valvular affections of the heart; especially when the valve-injury is primary; and the changes in the muscular wall are consequential and not rarely compensatory. He has some views forming themselves in his mind that the heart is a muscle, and, as such, liable at times of passing debility; just as any other muscle may be feeble and flabby from malnutrition—let the cause of that malnutrition be what it may. He knows better than to diagnose "fatty degeneration" when the patient is too young to be the subject of degenerative change. He has learned that fatty degeneration of the heart is like unto the rotting of the over ripe apple; and is the outcome of coronary occlusion in the whilome large ventricle of that great vaso-renal change commonly spoken of as "chronic Bright's disease." The comparatively small coronary artery is exposed to the full force of the hypertrophied ventricle; and over-tension is the essential cause of atheroma. Consequently the coronary arteries become extensively atheromatous; and thus the nutrition of the big heart is cut down below the point of the maintenance of structural integrity. And then failure of the heart is the last act of the long pathological drama. Fatty degeneration of the heart is a truly senile change; and quite distinct from conditions of muscular flaccidity which are often found in persons who have not entered the phase of senile decay.

But disturbance of the nerve-mechanism of the heart is more or less new to him. Yet when we remember the exquisite and complicated nerve-balances, by means of which the heart swings rhythmically, can we be surprised at disturbances therein; and especially now when neurosal affections of all kinds are on the increase. That the heart should not be exempted can surprise no reflecting person.

The neurosal disturbances of the heart are of various kinds.

First comes *palpitation*. Not the palpitation of effort,—the palpitation essentially of muscular adynamy. But the palpitation which comes on under other circumstances than effort; set up by mental emotion, or disturbance elsewhere, as the palpitation of a displaced uterus, or a tender ovary, or piles. Such palpitation is common with women of a highly developed nervous system. It is not uncommonly found along with indulgence in tea. Just as some men have a "smoker's heart."

Such a heart is always aggravated by elastic gas in the stomach or colon, pressing upon it, and perturbing and incommoding it, and causing it to beat irregularly. Such a heart is like a bad tenant whom you cannot oust. Bad at the best it is worse than usual upon any provocation.

But there is something much worse to endure than palpitation, and that is failure of the heart's action to the point of syncope, but just stopping short of loss of consciousness. Prostrate, incapable of movement, the afflicted woman lies powerless enduring all the agonies of death. Less commonly the patient is a man. To my mind no other human experience exceeds that of this terrible mental pain. In *angina pectoris* the attention is distracted by the severe bodily anguish endured; but when the toxic matter irritates the inhibitory fibres of the vagus, and so arrests or holds back the heart's action it is unmingled psychical pain which is experienced. It seems as if the dread hour of dissolution had arrived "like a thief in the night."

The term "toxic matter" has just been employed; What is the toxic matter? In my opinion it is unquestionably uric acid. These sufferers will, almost without exception, pass urates; and that too more or less persistently. They may be small fastidious eaters, not given to animal food to excess, yet their livers revert to the early uric acid formation of the birds and reptiles. "Poor man's gout" is their complaint; but it is none the less real. Such persons are usually of the neurotic or Arab build; large in the head with small abdominal viscera. They are bright spare active beings. Typical instances of the saying—"the sword will wear out the scabbard." Commonly they suffer from indigestion, and acidity with flatulence. Very commonly they also suffer from palpitation as well as these attacks of heart-failure. Not uncommonly they are told by some medical man that they have a "weak heart." Yet, at all other times, the heart is found large, powerful, beating regularly; indeed the large heart of vaso-renal change, with the loud accentuated aortic sound. It is not a "weak" heart by any means; but it has its "hours of weakness" without doubt. There is, too, the full artery with its hardening wall, and the copious flow of urine—the physiological outcome of high arterial tension. It may be said broadly that all persons who are undergoing the vaso-renal changes are polyuric. A large copious flow of pale coloured urine of somewhat low specific gravity is the rule with robust persons of the Norse type, with usually an absence of lithates. But with the slighter spare personages of the neurotic, or Arab type, a copious output of pale urine alternates with times when the aqueous output is smaller, but urates are present in abundance. (These neurotics of the uric acid formation often suffer from migraine; during the attack, the flow of urine is copious.)

The subjects of these attacks of heart failure are usually bright, intelligent, and high-spirited. They are all "up and down." It is

difficult to realize that the girl who is the life of a party one day, is in bed prostrated with the headache or heart-failure the next. Yet that is the experience of "the neurotic." Capable of looking after others,—and looking well after them—she is absolutely incapable of looking after herself; and is one of the most difficult patients to treat, albeit always thankful to her medical man for anything he may be able to do for her.

Just as **Digitalis** is useful in muscular adynamy of the heart, whether with or without valvular complications; so **Belladonna** is useful in nervous disorders of the heart. By a steady course of belladonna, combined with other remedial measures, according to the indications of each case, and careful regulation of the dietary, the neurotic affections of the heart can usually be brought under control.

HEART (Secondary Valvular Disease of).

J. Milner Fothergill, M.D.

The subject of valvular disease of the heart is one of great importance to the general practitioner. Not only is it common, but very frequently the medical opinion given moulds the patient's future. As for instance, with the late Lord Iddesleigh. A valvular lesion was discovered in early manhood, whereupon the patient was, in accordance with the views of that time, debarred from exertion of all kind, mental and bodily. But as years rolled on he gradually entered public life, and found himself all the better rather than the worse for setting aside those medical opinions which had for long bound him in fetters. This was rather unfortunate for the said medical opinions; and the case illustrates well the prevalent tendency to over-rate the gravity of certain valvular lesions.

When a primary injury is inflicted upon a cardiac valve, the heart becomes degraded in strict proportion to the extent of the lesion. A small injury will permit of the patient taking a brisk walk; but if he attempts to run the lesion soon reveals itself. A larger lesion will permit of a quiet walk; but if a brisk pace be attempted, the cardiac lesion makes itself felt uncomfortably. A still larger lesion, and any effort is painful and oppressive. But in the ordinary patient, and taking the vast majority of cases, the injury remains quiescent. Primary valvulitis if usually quiescent, however, entails modifications in the heart-walls, which are strictly secondary to it. If the lesion be a large one, the muscular compensation is never complete and perfect; and soon wears out. If a comparatively small injury be inflicted the compensation is fairly perfect, and is well maintained for years. Such persons may have attacks of temporary break-down of the heart

muscles, as after privation, or indigestion, or diarrhœa, or other exhaustive malady, which cause dropsy, and the other phenomena of the failing heart. But after a rest in bed, appropriate food, and a course of cardiac tonics, the symptoms disappear, and the patient goes back to his, or her wonted habits. No change has taken place in the valvular lesion ; but there has been temporary failure in the muscular compensation.

At last the muscular debility is due to fatty degeneration of the heart-walls, and then a temporary rally alone is possible, while the case marches on to the inevitable end. By this time there will be other evidences of senile decay. The artery is hard in almost all cases. When the final break-down is being approached the body generally ages. Such is the natural history of a *primary* valvular lesion with the resultant muscular changes which each form carries with it.

The natural history of the *secondary* valvular lesion is widely different, both as to its pathological relations and its clinical phenomena. It is altogether a more complex matter than primary valvulitis.

This secondary valvulitis, (otherwise "progressive," or "sclerosing") is found with the large heart of "chronic Bright's disease," or "vaso-renal change." Here we find that from some cause or other : whether over-taxation of a competent liver, "rich man's gout" ; or an inherently incompetent liver, or as Drs. Budd and Murchison termed it, "an insufficient liver" giving "poor man's gout;"—the liver reverts to its early uric acid formation, and the blood is surcharged with nitrogenized waste. A rise of blood pressure leads to a larger bulk of urine, and so a larger quantity of the insoluble uric acid is washed out of the system. (That all persons with chronic interstital nephritis are "polyuric" is a well recognized clinical fact). This is usually an affair of years ; and often of many years. If the uric acid be cast out by the kidneys, these organs are irritated, and a growth of connective tissue is set up in them until the kidney becomes "inadequate" as Sir Andrew Clark terms it. When the kidney becomes inadequate to the discharge of its function, the condition is both an advanced and a grave one. Long before the kidney destruction reaches this stage, there are obvious changes to be found elsewhere. The highly distended arterial system takes on the atheromatous change, by which the arterial wall is rendered hard and brittle. To overcome the high blood pressure in the arterial system, the left ventricle becomes enlarged, or hypertrophied. The powerful ventricle in its contraction throws a considerable strain upon the mitral valve-curtains ; and these can often be heard to close on the ventricular systole with a clear and sometimes

even ringing sound. This loud valve sound may exist for a long period before a murmur puts in its appearance. Or the highly distended aorta recoils in proportion to its distention, and the valves at the root of the aorta are driven violently together, producing a loud accentuated second sound. This is the pre-murmuric stage of valvulitis. The accentuated valve sound is the precursor, or herald of coming valvulitis, of which it is the prodromus.

So soon as the tell-tale murmur can be discovered we then understand that the case is within a measurable distance of its end. At first it can be caught by the trained ear, while the valve sound is still loud and distinct; but as it progresses the murmur gradually takes the place of the valve sound. For a time the phenomena are those of the vaso-renal change, unaffected by the valvular lesion. Thus the practitioner may be confronted by the murmur of mitral stenosis; but there co-exists a large left ventricle and a tense artery; conditions very different from what he was taught at the hospital, and which he has hitherto regarded as those essentially belonging to mitral obstruction. He is puzzled over the case—and small blame to him—but if he will reflect what muscular changes have preceded this form of mitral stenosis (with its perplexing associations) he will soon see a way out of his dilemma.

In *primary* valvulitis the muscular changes follow in the wake of the valvular lesion. In *secondary* valvulitis the muscular modifications precede the valvular lesion.

In mitral regurgitation of secondary nature these precedent and antecedent muscular changes again must be borne in mind.

When the aortic valves are affected, the practitioner expects to find an enlarged left ventricle giving increased driving power; but, granting this, the progressive character of the malady must be kept in mind in most cases.

It not infrequently happens that a small aortic lesion, of primary, static nature, of long standing, co-exists with the heart of the vaso-renal change. And then what has the practitioner to do? He must wait and see at what rate the valve-lesion progresses. There is no other way out of the difficulty. But in such cases the discovery of the lesion is usually a matter of accident, and not due to some uncomfortable sensation which sends the patient to the physician. When the cardiac lesion is sufficiently advanced to make its consequences felt, the case has passed beyond the stage of any difficulty in its interpretations. When such a lesion is found, while the patient makes no complaint of symptoms connected therewith, it will usually

be well for the practitioner to keep his discovery to himself, and wait the turn of events—unless he be familiar with that heart, and be in a position to know for certain that the murmur is of recent standing, indicating a new departure. If in an elderly person, who for long has had a large heart and a hard artery, a murmur develops, the matter is one of grave importance. But if its history be not so known, it is well to pause. Time will make it plain.

At what rate do cases of secondary valvulitis progress? What is their prognosis? The latter question is easily disposed of; the prognosis is hopeless. But the first! It is impossible to say. I have watched a number from the pre-murmuric stage to the end. In several the progress was rapid, and the course run in two or three years. These were aortic cases. Others have been under observation for over five years without perceptible, or obvious change for the worse. They are cases of mitral stenosis. [The very day these lines were penned I found at the hospital a patient who first attended twelve years ago. She had then a large ventricle and a loud aortic second sound. She went on from the pre-murmuric stage to a distinct murmur. I quite thought she was dead and buried; instead of that she was little altered during the seven years she had ceased attendance. In the interim she had become a chronic bronchitic. It seems possible that this was not without its effect upon the vascular system. Retarding the blood-current, and so lessening the blood-pressure within the arterial system, the strain upon the aortic valve-curtain was diminished; and so the bronchitis brought the progressive valvulitis to a standstill.]

The treatment of the two forms of valvulitis differs. The **Digitalis** and **Iron** treatment, which is so successful in *primary* valvulitis, is commonly worse than useless in the *secondary* valvulitis of the vaso-renal change, where uric acid solvents and a suitable dietary are indicated.

HERNIA.

W. H. Elam, F.R.C.S.

Although a large amount of work has been done in the way of treatment for this widely prevalent defect, we nevertheless appear to be wanting in exact knowledge as to the anatomical relations of, at least some varieties of, hernia; and the question of etiology, notwithstanding scientific investigations referred to in last year's "Annual," is far from being settled.

Again, in regard to treatment of unstrangulated hernia, whether reducible or irreducible, we shall probably be many years before the subject passes its controversial stage. Many statistics of results of operative interference for radical cure, together with the percent-

age of fatality have already been tabulated, but the whole question has yet to be submitted to rigid examination.

Great success has been obtained by Mr. Wood and Mr. W. Macewen, as will be seen below, in operations for radical cure, but it will be observed that the teachings of these and other surgeons have not met with unqualified approval.

In last year's "Annual" attention was directed to two varieties of inguinal hernia, namely, inguino-properitonealis of Krönlein and the inguino-interstitialis of Goyrand. In the first kind the sac is between the peritoneum and the fascia transversalis; in the second the sac is in front of the fascia transversalis and in the midst of the muscular wall. Küster describes a third variety of inguinal hernia which he terms *inguino-superficialis*. In this kind, the sac comes out through the abdominal ring and turns upwards and outwards beneath the skin of the abdomen, downwards beneath the skin of the thigh, or backwards beneath the skin of the perinæum. Küster gives the history of three cases. The following is a summary of the peculiar characters of this form of hernia.

(1). The hernial sac is formed by a peritoneal diverticulum containing the testicle and the spermatic cord, hence it is a congenital hernia. The hernial orifice is large and traverses the abdominal wall directly from behind forwards.

(2). The testicle is always *en ectopie*, is not descended into the scrotum, but is usually in the vicinity of the external ring.

(3). The testicle is always more or less atrophied, and the spermatic cord short.

(4). In two cases the spermatic cord did not lie on the median side of the hernial sac as is unexceptionally the case in inguinal hernia, but was on the external side.

(5). The sac is covered exclusively by the skin and very much thinned superficial fascia. ("Arch. F. Klin. Chirg.," B. 34, H. 1.)

The practical importance of these varieties of hernia are illustrated by two cases of properitoneal hernia related by Dr. Baron (*vide* "Wein. Med. Presse," No. 16, 1886).

In these cases a sort of second sac or offset from the original sac extended between the structures composing the abdominal walls. The first example concerns a small inguinal hernia that had been strangulated some days. Herniotomy was performed. On reducing—or attempting to reduce—the gut a like tumour was found above the inguinal canal. When the neck of the primary hernia was opened up a large properitoneal cavity was discovered as large as two fists, in the

mouth of which the bowel was incarcerated. A successful reduction was made. The second case was that of an old woman with a strangulated femoral hernia. Herniotomy was performed. After the femoral ring had been enlarged the strangulated loop was reduced. It was now observed that lying deeply in the neighbourhood of the hernial orifice was a large properitoneal cavity. This was entered through the femoral ring and it was evident that its aperture was on the abdominal side of that ring. See also case of properitoneal hernia in the femoral ring in a woman of fifty, by Dr. Tansini ("Centralblatt für Chirurgie," 1886, No. 31).

Mr. F. Treves reviews the literature and gives a digest of the anatomical and other relations of *cæcal hernia*. He draws attention to the fact that the text-books describe the cæcal hernia as being without a sac. An account is given of the various reported cases upon which this statement is founded, and it is shown that in the more conspicuous instances the evidence is unsatisfactory.

Two cases are given. The first was met with in a man aged forty-one. The rupture was inguinal, the sac was double, and of enormous size. The sac was cut away, the cæcum exposed and reduced, and a complete cure resulted.

The second case was in a woman aged fifty-six, and occupied the femoral region. The appendix could be distinctly felt. The hernia was reducible.

The author proceeds to examine fifteen recent cases (eight from recent records, nine from metropolitan museums). It appears that the hernia is much more common in the inguinal than the femoral region, and is more common in males than in females. There is, in nearly every instance, a perfect sac. In a few examples it was incomplete; in no case was it absent. The caput coli may be protruded alone, or in the hernia coils of ileum and omentum may be found. The rupture tends soon to become irreducible.

Of the clinical characters of cæcal hernia little is to be said. The hernia is usually irreducible or most difficult of reduction. This may depend upon mere bulk or engorgement, or upon adhesions, or upon an incomplete sac, or upon the fact that the line of reflection of the peritoneum is close about the hernial sac. The hernia is apt to become inflamed, and as a result to become adherent.

The hernia is frequently in the condition known as that of incarceration or obstruction, and, when so affected, it appears to present no distinctive symptoms. It then compares with a loop of transverse colon obstructed within the sac of an umbilical hernia. The rupture

may be strangulated, but this condition does not appear to be so common as that just named. ("B. M. J.," vol. i. p. 382, 1887.)

Mr. G. A. Wright gives an account of seven cases of cæcal hernia in children. The patients were between the ages of three months and seven years. They were all males, and the rupture in each instance inguinal. In all the cases operated upon there was a perfect and well-defined sac. The sac may be funicular, or be formed from the open tunica vaginalis.

The paper serves to modify Mr. Treves's statement that "the hernia of the cæcum is practically limited to adults." ("B. M. J.," p. 500, vol. i.)

Dr. Ludwig Ebner contributes a most valuable and highly scientific paper on *perineal hernia*. ("Deut. Zeitschrft. f. Chirug.," B 26, H 1 and 2). After showing how little this kind of hernia has been investigated he gives a historical review and then discusses the etiology under three heads.

(*a*) The relations of the peritoneum of the pelvic cul de sac.

(*b*) The condition of the levator ani muscle.

(*c*) The length of the mesentery.

Under the first head the author compares the differences in different individuals, of the relations and condition of the peritoneum, both in the sexes and in the embryo.

Under the second head, he discusses the varieties in the relations of the group of muscles to which Heule gave the names levator ani, ischio-coccygeus and coccygeus, and from the dissection of sixty perineums, he shows how now and again there is a well marked space between the levator and ischio-coccygeus on the one hand, and between the ischio-coccygeus and coccygeus on the other.

It is impossible here to follow the author through his interesting anatomical researches, his comparison of the hernia in the male and female sex, and of the exact conditions which influence the formation of an anterior or posterior perineal hernia.

The following are briefly the conclusions deduced: (1,) Perineal hernia is highly induced by congenital conditions; (2,) Traumatism cannot be considered to have any causal relation; (3,) The cavity between the bladder and rectum (or bladder and uterus) is deeper and more marked in the embryo than the adult, and if this depth of cavity remain through adulthood, there is a condition existing favouring the formation of this kind of hernia; (4,) The depth of this cavity varies greatly, both with the embryo and the adult; (5,) The descent of the hernia is at first in or near the middle line, but on descending deeper

into the perineum it acquires a deviation to the right or the left; (6,) The hernia finds its way through a separation either between the muscles, levator ani, and ischio-coccygeus or between the latter and the coccygeus; (7,) These separations between the muscles are frequently discoverable by careful dissections; (8,) All herniæ which appear in the perinæum in whatever position, are only varieties of one and the same hernia; (9,) A classification of these herniæ with relation to the transverse muscle is impracticable; (10,) Habitual constipation favours the development of a perineal hernia.

In regard to *treatment* of hernia very many important papers have appeared, and much discussion upon the subject has taken place at the meetings of societies. With a slight exception only the question of radical cure will be considered here.

With *strangulated hernia*, the importance of early operation is becoming more and more the recognized treatment. The danger of operation, when strangulation has only existed a few hours, if ordinary antiseptic precautions be taken, is almost nil, much less in fact than prolonged and injudicious attempts at reduction by taxis.

A hypodermic dose of **Morphia** may be given and **Ice** applied for an hour or two, but if taxis fail after this under an anæsthetic, an operation should be undertaken at once, the more so as a radical cure may be attempted at the same time.

The following exceptions however, are given for consideration :—Dr. Routier calls attention to the danger which may result from the administration of morphine in certain cases. He gives the example of a patient suffering from strangulated hernia. She had been seen by a medical man who, having made an ineffectual attempt to reduce the hernia, administered a hypodermic injection of morphine, under the influence of which the urgency of the symptoms subsided and gave rise to a false impression as to the nature of the case. The patient died, and at the *post mortem* examination not less than 75 centimètres of gut were found to be gangrenous.

Irreducible Inguinal Hernia treated by Elastic Pressure.—Dr. Elder publishes the case of a man æt. 56, under Professor Chiene's care, who had suffered from hernia for more than thirty years. The hernia consisted of bowel and indurated omentum, and when seen was irreducible. An elastic bandage was applied over the hernial tumour during 16 days with a successful result. The narrative of the case concludes with the following remarks : "The two points which, I think, are worthy of notice in this case, are : first, the efficacy of the elastic pressure in the treatment of irreducible hernia; and, secondly,

the method of applying the pressure. I think the first of these is quite evident to everyone, namely, that continued elastic pressure, carefully applied, must reduce an indurated hernia in size, and, by reducing its size, must make it more easy to reduce. Secondly, as to the method of applying the pressure ; at first, the bandage was applied as a single spica, but it was found that the swelling was very apt to make its way out below the bandage, by passing towards the middle line. On July 17th, however, I applied the bandage more in the form of a double spica, although not a true double spica. I began the bandage at the right anterior superior iliac spine, crossed the abdomen to below the left trochanter major, then round the thigh and across the perinæum to the right groin and right anterior superior iliac spine, where it was pinned to the beginning of the bandage. Then it was wound round the back, along the iliac crests, to keep it from slipping down. I then brought it down over the hernia, on the left side, across the perinæum, and round the right thigh, over the front of the abdomen to above the left iliac crest, and round the back to the right anterior superior iliac spine, where the bandage began. I then went on as before, following the same course, but making the bandage above slightly overlap the one below, until I got all the pubic region covered, except a small space in the middle line for the penis. This opening, which always weakens the pressure, must not be too large, otherwise the hernia will tend to escape through it. I consider that it was the altering of the method of putting on the bandage, that had such a wonderful effect in this case. This bandage had only been once on when the hernia disappeared. Another point is, that enough wadding must be used, in order that, when the bandage is on, it may not pain the patient, and in order that the pressure may be equal all round the hernia."

For Reduction of Strangulated Hernia.—Dr. Nikolaus proposes the following method in place of taxis. He points out that in reducing a strangulated or incarcerated hernia, the end can be much more readily obtained by traction from within the abdomen, than by pressure applied without that cavity. He cites cases where taxis had failed during life, but where after death the gut was readily reduced by dragging upon it after the abdomen had been opened. He draws attention to the frequent failure of taxis, and supports his arguments with reference to traction, upon a series of experiments with gut held in an artificial opening. After reviewing the various plans of reduction by posture, he advises that the patient be placed in the knee and shoulder position. Both knees rest upon the bed, the femora are kept in the vertical posture, and the shoulder of the sound side is supported also

upon the couch. Before this posture is assumed the bladder and rectum may be emptied, and while it is maintained gentle pressure may be kept up on the swelling. The position may be preserved in for twenty or forty minutes, or longer. Dr. Nikolaus maintains that it relieves the circulation in the strangulated part, that it reduces the intra-abdominal pressure, and causes the weight of the mass of intestines to act by traction upon the segment of gut retained. He gives cases to show that this method has succeeded after taxis under chloroform has failed. ("International Journal of Med. Sciences," July, p. 230.)

In some cases of strangulated hernia, when the sac has been opened and the stricture divided, it is found that on account of several coils of intestine being down and distended, the bowel in the abdominal cavity also in a similar condition of distention, full of fæces and gas, the bowel cannot be returned to the abdominal cavity, what shall be done? Dr. Hugo Fuhlrott discusses the question ("Deut. Zeitschft. f. Chirurg." B. 25, page 441) and reports cases, each one being successful, in which the contents of the bowel were allowed to escape externally by (*a*) puncturing with a trocar (*b*) by puncturing with a bistouri (*c*) by incising the bowel in one or more places and afterwards suturing the openings with fine silk. In each case, after several ounces of fluid and some gas had escaped, it was found easy to replace the bowel, which of course had collapsed, and consequently the difficulty of reposition was overcome. Where a simple puncture was made the opening was not sutured.

In cases when, after opening the sac, the bowel was found gangrenous, several inches of intestine have been exsected, and the continuity of the canal restored by Lambert sutures.

Dr. N. B. Garson (St. Louis) reports such a case ("Journ. Am. Med. Assoc." 7, May, 1887.) He advises that when the condition of the patient is such that immediate resection of the gangrenous bowel is not possible, this should be incised and left *in situ*, until the patient recovers, when a radical operation may be attempted.

The most important question, however, is the consideration of *radical cure* of hernia. It is impossible here to notice half the papers and cases that have been published referring to this; only so much can be given as will afford a fairly clear view of the position of the question.

In all cases when an operation has to be performed for the relief of strangulation of the hernia, the sac should be dissected out, and every precaution taken to ensure the cure of the hernia as well as the relief of the strangulation.

The "Deut. Zeitschft. f. Chirg." B 24, H 3 and 4, contains a valuable paper by the late Dr. Anderegg, giving an analysis of 136 operations performed for radical cure.

The mortality of the cases in which there was no strangulation nor incarceration of the hernia was about three per cent.

The method of operating was to expose the sac, dissect it out, draw it down, and ligature it as high up near the internal ring as possible, and then remove it, the pedicle being returned to the abdominal cavity. It is perhaps best to transfix the pedicle and ligature it twice, otherwise the ligature may slip off. Catgut was used in most cases. The pillars of the external abdominal ring were sutured together with catgut in most cases of inguinal hernia. In some cases when the testicle was undescended and considered functionally useless, it was removed, *i.e.*, if it interfered with the success of the operation. In other cases the lower part of the vaginal process (congenital hernia) was retained and sutured over the testicle to form a new tunica vaginalis.

Permanent cure of the hernia is to be expected if small and of recent date, and is more hopeful with those individuals who have not attained maturity. In cases where there is a hereditary history the success is not so certain. The risk to life is influenced by the age of the patient, the size and position of the hernia, and the necessity of exsecting the omentum.

Very large herniæ occurring in old people are considered inoperable. Adherent portions of omentum or hypertrophied omentum should be removed after ligature, and the pedicle returned to the abdominal cavity.

A truss is not allowed to be worn after operation, unless there be a return of the hernia, as the actual wearing of such truss appears from some unexplained reason to favour the relapse. (*Vide* also "Nord. Med. Archiv.," vol. 18, fusc. No. 2).

M. Richelot, in relating a case, says he has found no difficulty in separating the hernial sac from the cord, even when there is great thickening of the former. If operating before puberty, and when the testicle is undescended, by drawing it down into the scrotum, the development of it is favoured, and its function will probably be complete ("Revue de Chirurg.," vol. 7, p. 1035).

The whole subject was discussed at the meeting in November last of the Société de Chirurgie. With regard to congenital hernia, M. F. Ferrier said that it is necessary to distinguish groups of cases. With infants a suitable truss is usually sufficient, if efficiently

applied, to cure the hernia, but where this simple treatment is not successful, it is best to do an operation, for the latter is totally without danger. In those cases demanding operation in which the testicle is *en ectopie*, it is important where possible to preserve it, but if the testicle be thought to be functionally useless, and if it interfere with the success of the operation, it had better be removed.

M. Berger gave the result of his experience, and concluded—

(1,) That only in exceptional conditions should an operation for the cure of congenital hernia be attempted before puberty, even when the testicle is undescended.

(2,) After puberty, the operation should be reserved for cases: (*a*) when the hernia persists in spite of trusses, etc.; (*b*) for hernia with undescended testicle; (*c*) for hernia with irreducible omentum. (*Vide* "Revue de Chirurg.," December 1887).

In finally calculating the value of operations for radical cure, it is necessary to remember how many people die from strangulated hernia annually, and how this item of mortality would no longer occupy a position of any importance in statistics, if patients were successfully submitted to operations for cure. Also the comfort and usefulness of those who have the hernia cured, instead of going about in suffering, danger, and fear.

It has been shown, however, that those cases where the hernia is of recent date, small in size, easily reduced, and retained in normal position by a truss, are the most successfully treated by operation. These, however, are just the cases most easily managed without operation. (*Vide* "Deut. Zeitschft. f. Chirurg.," 26 Band., p. 113, and "Revue de Chirurg.," November, 1887).

The operative methods of Mr. Wood and Mr. Macewen were described in last year's MEDICAL ANNUAL, and the success met with by these surgeons fully confirms the views advocated by them.

The treatment by operation of umbilical hernia has undoubtedly advanced, as the following cases tend to show:—

Olshausen believes ("Arch für Gynäk.," Bd. 29, Heft 3) that congenital umbilical hernia is fatal unless operated on, despite the statistics of Lindfoles, who records twenty-seven cases of cure by pressure or the ligature. Olshausen, in fifteen cases, has seen no instances of preservation of life unless in operated cases. One child with part of the liver in the sac lived five weeks. When left to nature we usually get destruction of the amnion, tear of the peritoneum, and peritonitis, causing death. The following cases of operation are given:—

Case 1, by Breus. In this case Breus opened the sac, replaced the

hernial contents without difficulty, grasped the opening with forceps, and passed strong silk suture below the forceps. The sac was then cut away above the forceps and cauterized. Cure resulted.

Case 2, by Felsenreich. The sac was opened, excised, and the abdominal incision sutured by 12 stitches. Union by first intention.

The cases of Lindfoles and Stadfeldt we omit, and pass on to give the one recorded by Olshausen.

The child presented footling, weighed 4280 grammes, and was 57 cm. long. It had a large umbilical hernia. The cord was 96 cm. long, and was tied about 10 cm. from the umbilicus. The opening of the hernia was about 4 cm., and the sac contained intestine. Half-an-hour after birth there were bullæ and a slight tear of the sac. Three-and-a half hours afterward the following operation was performed:—An oval incision was made close to the skin margin around the internal opening, and then the skin edge and amnion stripped off the parietal peritoneum (sac). The raw edges of the skin were then brought together, the cut vessels being ligatured. In this way the hernia was reduced with the peritoneum intact. The wound healed slowly but soundly. The child died eight months afterwards from intestinal catarrh.

Mr. Keetley reports two cases of operation in children. After exposing the sac, he reduces the hernia, and then twists the sac round two or three times, separates the peritoneum from the linea alba above the hernial aperture, passes a needle thread with catgut through the sac, and finally sutures the sac in the space made between the abdominal wall and the peritoneum, and brings together the margins of the skin and deep parts forming the hernial aperture by hare-lip pins. ("Annals of Surgery," Sept., 1887).

HERPES.

N. Whitelaw Bourns, M.D.

Four varieties of this affection are generally described: Herpes facialis, herpes præputialis, herpes iris, and herpes zoster. The local treatment in each variety consists of protection of the part from injury, and soothing applications, as a dusting powder of **Oxide of Zinc** and **Starch**. In zoster, Duhring uses a paint of flexible **Collodion** and **Morphia**, 10 grains to the ounce. Internally saline aperients, or as recommended by Bulkeley, to cut short the duration of the eruption, a pill every two to four hours of the **Phosphide of Zinc**, (1/3 gr.) and the **Extract of Nux Vomica**. For the neuralgic pains which so frequently follow, **Quinine** and **Arsenic**, or the use of a mild galvanic current.

HYDROA. *N. Whitelaw Bourns, M.D.*

Is the name applied to a bullous eruption, which some authorities maintain is distinct on the one hand from herpes iris, and on the other from pemphigus. Dr. Crocker says the features characteristic of the affection at some period of its course are erythema, vesicles, bullæ or pustules, with a tendency to group herpetiformly. He advises increasing doses of **Arsenic**, up to 8 minims of the **Liquor Arsenicalis**, or of the **Tincture of Belladonna** up to 30 minims, and locally a lotion of **Liquor Carbonis Detergens**, or of **Sanitas**, diluted with equal parts of water ("British Medical Journal, May 22).

HYPERIDROSIS (Ephidrosis). *N. Whitelaw Bourns, M.D.*

When affecting the palms, cannot be mistaken, but when the feet are the seat of the complaint, the soles become tender, inflamed, and the skin macerated, giving rise to some difficulty in the diagnosis.

THE TREATMENT must be both internal and local. The general health to be improved by the administration of **Strychnine**, **Quinine**, and **Arsenic**; but the most powerful remedy is **Atropia**, from $\frac{1}{120}$ to $\frac{1}{60}$ of a grain. Dr. Ringer has shown that small doses of diaphoretics, as $\frac{1}{20}$ of a grain of the **Nitrate of Pilocarpine**, have the property of checking excessive sweating.

LOCALLY: The use of astringent applications, rubbing in the **Tincture of Belladonna**, or soaking the stockings and cork soles in a saturated solution of **Boracic Acid**, as suggested by Dr. Thin.

Mr. Richardson mentions having relieved a very rebellious case by the daily application of a strong solution of **Soda** ("Lancet," August 20, 1887).

M. Virusse says sweating of the feet, whether accompanied by pain or fetidity, is easily cured by the application with slight friction of **Subnitrate of Bismuth** to the diseased parts. He maintains that suppression of exaggerated perspiration does not produce the accidents of metastasis that have been attributed to it. In some cases bismuth suppresses only temporarily the profuse perspiration, but the fetid odour and pain disappear permanently ("Practitioner," May, p. 382).

HYPERTRICHOSIS (Hirsuties). *N. Whitelaw Bourns, M.D.*

When occurring on the face or arm, as so frequently happens in females, may require surgical interference. The growth may be temporarily removed by shaving or by the application of depilatories. The complete destruction of the hair papilla may be effected by the introduction of a straight needle dipped in **Carbolic Acid**, into the follicle after the removal of the hair, as suggested by Bulkeley, or by electrolysis: a very fine needle attached to the negative pole is passed

down by the side of the hair, while the positive pole, with sponge electrode is grasped by the patient. A little speck of froth appears round the hair, which can be removed upon the slightest traction. The current from an eight or ten celled battery is sufficiently powerful.

The following depilatory is used by McCall Anderson :—

℞ Sulphuret of Barium ʒiss | Oxide of Zinc ʒvi
Carmine gr. i.

ICHTHYOSIS (Xeroderma—Fish Skin Disease).

N. Whitelaw Bourns, M.D.

Considered by Campana a manifestation of a local, and usually a congenital, disturbance of nutrition (" Bull. de Acad. Med. di Genoa").

The disease sometimes disappears after a serious illness. May be much improved, or even cured, by a prolonged course of **Arsenic**, frequent bathing and washing, vapour or Turkish baths, and the application of oily substances, **Lanolin** being the most useful basis. McCall Anderson advises the subcutaneous injection of ⅓ of a grain of **Pilocarpine**. (Diseases of the Skin, p. 373).

In a case of Ichthyosis hystrix, we found the daily application of equal parts of **Salicylic Acid** and **Creasote** rapidly remove the thickening, but the affection has lately shown an inclination to recur.

IMPETIGO *N. Whitelaw Bourns, M.D.*

Is now generally looked upon as a variety of eczema (eczema pustulosum), though some authorities, as Duhring, maintain that it is a separate disease.

Bockhart thinks the pustules are caused by cocci (staphylococcus pyogenes aureus and albus), he therefore treats the disease with antiseptics, as a solution of the **Perchloride of Mercury.**

Impetigo Contagiosa.—Both contagious and auto-inoculable ; is also said to owe its origin to a micro-organism, and antiseptics are called for.

INCONTINENCE OF URINE (see " Urine," Incontinence of.)

INFLUENZA (see "Coryza" and "Air Passages," Therapeutics of.)

INSANITY. *Robert Jones, M.D.*

(The General Treatment of cases of Insanity is fully considered in the Dictionary of New Treatment, " Medical Annual," 1887, p. 262).

Ball, of Paris, has contributed an interesting article upon partial responsibility of the insane from the consideration of the case of Euphrasie Mercier, a woman whose ruling passion was cupidity, whose family history was tainted with insanity, whose chief delusions were religious, and who murdered her mistress for pecuniary reasons, taking the most ingenious precautions against discovery. Ball con-

siders that the protection of the insane from criminal responsibility has gone quite far enough and may even be abused. The matter has received some previous attention from the hands of Dr. Yellowlees. Palmer has contributed a valuable article upon microscopic changes in insanity, pointing to essential degeneration in the multipolar cells and their processes. The treatment of *mania* with **Hyoscyamine** and **Hydrobromate of Hyoscine** is the subject of a paper by Dr. Wetherill, Pennsylvania; he concludes that the latter drug in doses of $\frac{1}{100}$ to $\frac{1}{240}$ grain is much superior as a hypnotic and calmative than hyoscyamine. The report of the State Hospital, Norris Town, Pennsylvania, suggests great care in the treatment of bathing the insane, and frames a code of rules admirable in suggestion and detail, for the use of attendants. Dr. Savage, in an article upon American asylums and the International Medical Congress, speaks highly of the treatment, construction, and mechanical details in the States asylums, he calls attention to the non-restraint system which has become a hobby, prejudice against seclusion and restraint being possibly carried too far. In a contribution upon **Chloral Hydrate** in mental states, Dr. Savage deprecates its too frequent use, that by establishing a habit it disturbs the constitution, and brings about many disastrous results; but although there is danger accompanying its use, in cases of *acute delirious mania*, given with abundance of food and stimulants, it has saved many lives. McKennan, of Pittsburg, calls attention to cases in which mental symptoms remained in abeyance after an attack of facial erysipelas; the only reason advanced being that of a counter-irritant; probably the hyperæmia called into activity intellectual centres, which had lain dormant until the fresh stimulus, and thus favoured recovery. Dr. Wilkins, of California, calls attention to the diminished proportion of insane Chinese compared with other nationalities; their quiet life and unstimulating diet having possibly much to do with their lessened liability to excitement and speculation.

Dementia, Idiocy, and Imbecility.—Dr. Langdon Down has given a succinct and interesting description of affections under this heading in his Lettsomian lectures, dividing idiots and imbeciles into two classes, either according to the physical appearance under an *ethnic* system, into Negroid, Malay, North American Indian, Mongols, Aztecs, and Caucasian, these being a reversion in type; or under an *etiological* system into (1,) The *congenital*, where heredity, consanguinity, disparity in parents' age, cranial deformities, played the chief part, and where also primiparous complications increased the liability to idiocy. Emotional life in the mother is referred to as a cause, the influence of alcohol, a

neurotic and phthisical inheritance being especially predisposing; the influence of illegitimacy is referred to as increasing the emotional nature, and by causing mental agony in the mother arresting the growth of the embryo. (2,) The *accidental*, caused by instrumental labour, insolation, opium and sedatives given by nurses, traumatic injury to the cranium, fevers, epilepsy, hæmorrhage, anæmia, and hydrocephalus, &c. (3,) The *developmental*, due to causes operating late in the period of gestation, whereas causes acting early gave rise to the congenital form, among these may be mentioned uterine hæmorrhage, sickness, and emotional disturbances, also convulsions and eclampsia during the first dentition, epilepsy or chorea during the second dentition, and epilepsy, chorea or moral deviations at the period of puberty. The early months of babyhood were perfectly uneventful in this variety, the change coming over an intelligent child either during the first dentition, or deferred till the second, or even reserved for the period of puberty. With regard to pathology the defect is one of development, there is muscular weakness and a simplicity of convolutional arrangement in the brain, and a diminished absolute weight of the brain; the supra-marginal convolution which Gratiolet describes as characteristic of man is often ill developed. As to treatment, it resolves itself into *medical*, *moral*, *or intellectual*, and *physical*. Maintain the patient in the highest possible health, give a liberal diet, with abundant nitrogenous, phosphatic, and oleaginous constituents, green vegetables are necessary, and anti-scorbutic. The surroundings should be influences of art and nature calculated to make life joyous, arouse observation, and quicken power of thought; residence should be on gravel; bed and sitting rooms should be spacious and well warmed; clothing should receive special attention; most of the deaths take place from lung or air passage diseases. The intellectual training should be based upon cultivating the senses, should be concrete rather than abstract; the physical should receive important attention, and should attempt to improve all voluntary movements, to walk with precision, to handle with tact; they must be taught to dress and undress, to acquire habits of order and neatness, to render themselves self-helpful, and as far as possible useful members of society, insomuch that everything which makes the patient practically useful, makes him also proportionably happy. The moral education is not the least; they should be taught to subordinate their will to that of another, that right doing brings pleasure, and wrong doing is followed by its deprivation. On no account should corporal punishment be resorted to, it is a bar to hygienic treatment and does not encourage self-respect.

INSOMNIA. *Robert Jones, M.D.*

The general treatment of insomnia is considered in the Dictionary of New Treatment, "Medical Annual," p. 266; the various hypnotic remedies, p. 252. (See also the Dictionary of New Remedies).

The following remedies have recently been recommended on account of their hypnotic properties.

Amylene Hydrate (tertiary amylic alcohol) has been recommended in cases of sleeplessness, with delirium. When there is diminished intra-vascular pressure, it should be administered with **Syrup of Orange**, or **Tincture of Vanilla**, in drachm doses. It produces a sleep lasting from six to eight hours, and is more agreeable to the palate than paraldehyde.

Hypnone is unpleasantly pungent, having a cherry-laurel like odour, and a taste not unlike creasote; chemically its composition is an acetophenon. Its action resembles chloral, although more powerful in its effect; it lowers the blood pressure, and is said to alter the composition of the blood. It has been recommended to allay nervous irritability, and Dr. Savage speaks rather highly of it, having given sleep and produced quietness in agitated cases, when all other drugs failed. It must be freely diluted, and may be given with **Alcohol**, **Syrup of Orange**, or **Peppermint Water**. It may also be prescribed in **Gelatine Capsules**, mixed with a little oil to modify its irritating action. It does not seem suited for sub-cutaneous use. Dose: 5 to 10 grains.

Methylal, being a somewhat aromatic and pungent fluid, should be diluted and prescribed in doses of ♏x. to ♏xxv. with **Syrup Cortic. Aurantii**. We have no experience of its use. It is considered a useful hypnotic.

Hyoscyamine acts upon the reflex centres, and causes muscular paralysis. It also causes dryness of the throat, rapidity of the pulse, and a general lowering of the arterial pressure through stimulation of the vaso-dilator nerves. It dilates the pupil, and for this purpose has been used as a local mydriatic when atropine causes irritation. As the various preparations vaunted, vary much in strength, we have always used that of Merk, of Darmstadt, dissolved in **Spt. Ætheris Nitrosi**, one should begin with $\frac{1}{60}$ of a grain. Tabloids, containing $\frac{1}{80}$ and $\frac{1}{100}$ of a grain, may be obtained from Burroughs, Welcome & Co., for sub-cutaneous injection. It should always be administered after a hearty meal and at midday, so that the effect can be watched. Sometimes the symptoms are more severe than was expected, and may be followed by profound stupor. It is advisable never to give this drug in

the insomnia of general paralysis, being more suitable in that of dynamic delirium.

Hydrobromate of Hyoscine has been recommended by Dr. Hammaker, who administered it in doses of $\frac{1}{120}$ grain. It possesses more hypnotic, and less depressing effects than hyoscyamine. It is, therefore, more suitable for procuring sleep than to subdue excitement. In one case it produced threatening heart symptoms, and it requires the same precaution as hyoscyamine.

INTERMITTENT FEVERS (see "Ague.")

INTESTINAL OBSTRUCTION. *A. W. Mayo Robson, F.R.C.S.*

For practical purposes the best classification is into two great classes, acute and chronic. The acute being sub-divided into (1,) Strangulation by bands or through apertures; (2,) Volvulus; and (3,) Intussusception. The chronic into (1,) Stenosis of bowel; (2,) Obstruction in the lumen; (3,) Compression from outside; and (4,) Chronic intussusception.

DIAGNOSIS.—The symptoms of acute intestinal obstruction are those of strangulated hernia:—severe abdominal pain coming on suddenly, at first like colic; vomiting, first of contents of stomach, then of bile, and lastly of fæces; constipation; abdominal distension and collapse.

If in a young person, with history of previous abdominal inflammation, and pain in region of umbilicus, there occur extreme collapse and excessive vomiting, without marked distension, or the presence of a tumour; the case may be one of strangulation by a band. In volvulus, which occurs oftenest in males over 40, there is rapid and extreme distension of the abdomen, the vomiting and pain being much less severe than in the case of strangulation by bands.

In acute intussusception, which is commonest in children, pain is well marked; vomiting is variable; tenesmus with passage of blood per anum is usually present, and a definite tumour can often be felt through the abdominal walls. If the large bowel be involved, the intussuscepted portion may often be felt in the rectum.

The symptoms of chronic obstruction are flatulency, with digestive disturbances; loss of flesh; depression of spirits; constipation, often alternating with diarrhœa; pain of an intermittent character; abdominal distension; vomiting more or less severe, and finally the symptoms of acute obstruction; this history lasting more or less over a period of several weeks.

Anything causing gradual obstruction of the bowel, such as a tumour outside or inside the gut, or simple or malignant stricture, may produce almost identical symptoms. The history gives assistance, and the presence or absence of a tumour helps in the diagnosis.

Fæcal accumulation presents special features. It generally occurs in women after middle life, with the history of previous and long continued constipation, and with the presence of a tumour, usually in the region of the cæcum, or in the course of the colon, hard and uneven, painless on manipulation, and at times taking the impression of the finger on pressure: great abdominal distension is usually seen, and vomiting comes on late in the case. (See paper by Mr. Treves, "Lancet," Oct. 29, 1887, on the "Diagnosis and Treatment of Chronic Intestinal Obstruction.")

Other diseases which have been mistaken for intestinal obstruction:—Perforating peritonitis; localized paralysis of gut from enteritis; inflamed undescended testicle; strangulated hernia; lead colic, with constipation: renal or hepatic colic, with constipation; dysentery; cholera. (*Vide* Dr. Taylor, "Lancet," Aug. 6, 1887; also Dr. Illoway, "Med. News," Aug. 28, 1886.)

TREATMENT.—In acute obstruction early laparotomy is as much demanded as is operation in strangulated hernia. There is no recorded recovery of volvulus without operation, and in strangulation by bands, medical or expectant treatment can do no good. In acute intussusception, **Opium**, insufflation, or enemata should be tried; but these failing, early operation is advisable.

In chronic and sub-acute obstruction, much depends on the diagnosis; and in most cases great relief can be given by careful dieting, by **Opium** or **Belladonna**, and by the use of **Enemata**; but, with the exception of obstruction for fæcal accumulation, some form of operation will probably be ultimately called for in the greater number of cases.

The feeding, in case of obstruction, always requires attention; and where vomiting is persistent, *Peptonised Enemata* and nutrient peptonised suppositories may be given; but where the rectum cannot contain food, and vomiting is not very severe, fluid nourishment must be given in small quantities frequently. Sucking ice is often of great comfort to the patient. *Opium* "best given as morphia subcutaneously," is often absolutely curative in the early stages of intussusception, and in other cases of acute obstruction it lessens collapse by relieving pain: in not a few cases it has been credited with curing the patient. In chronic cases it is invaluable. It must not be forgotten that opium may completely disguise the symptoms and seriously obscure the diagnosis.

Purgatives are as a rule injurious, except in some cases of accumulation, and here they must be given with caution and conjoined with enemata.

Metallic Mercury in doses of 700 to 4,500 grains, has been used with success by M. Matignon ("On Traitment de l'occlusion intest. Thèse de Paris," No. 340, 1879) in cases of fæcal accumulation.

Electricity (Faradaic) has been said to do good; the cases having apparently been those of paresis of the gut.

Massage of the abdomen has been extensively tried in France with benefit in fæcal obstruction; and in a case of obstruction due to gall stones, it helped to overcome the obstruction. (See Fagge, "Lancet," 1872, vol. ii., p. 3). *Enemata* of water or other fluid are best given by syphon arrangement, so as to regulate pressure; the patient being in the knee-elbow position. They are of great service in fæcal accumulation, and at times will relieve accumulation above a stricture. In reducing intussusception a large enema is often of use; and Mr. Lund's elastic ring and handle should be employed to prevent regurgitation—the fluid being forcibly retained for a considerable time. (See case by Dr. Elliott, "Lancet," Jan. 8, 1887.)

Insufflation. The forced injection of air into the rectum has been employed with Mr. Lund's apparatus successfully in many cases of intussusception. ("Lancet," 1883, vol. i., p. 588; also Mr. L. Knaggs "Lancet," June 4, 1887.)

Enemata of **Carbonic Acid**, obtained either from a syphon of soda water or by means of introducing carbonate of soda, and afterwards tartaric acid into the rectum, have reduced intussusception.

Kussmaul's plan of washing out the stomach in cases of abdominal obstruction often gives great relief. (See paper by Dr. Rehn, "Centralb. für. Chirurg.," July 23, 1887.)

Puncture of the bowel with a fine trochar or aspirator. Although the operation is both unscientific and uncertain, in numerous recorded cases of both acute and chronic obstruction relief has been given, or recovery has resulted from puncture of distended coils of intestine. (See paper by Dr. Ogle, "Lancet," July 15, 1887, reporting numerous successful cases; see paper by Mr. Turner, "Brit. Med. Journ." May 5, 1887, where, after puncture in two cases fæcal extravasation occurred.)

The indications for laparotomy in acute obstruction have been re-remarked on; but in chronic or sub-acute cases no hard rule can be laid down. If a diagnosis of the cause of obstruction can be made, the course is clear; but if it cannot, and when in spite of careful dieting and treatment the obstruction persists and the patient is getting worse, abdominal section should be performed as a means of diagnosis; the treatment will then follow. (See paper by Mr. B. Pitts, April 30, 1887,

"Brit. Med. Journ."; see also Mr. Treves, "Lancet," Oct. 29, 1887, Dr. Morris, "Brit. Med. Journ." Dec. 18, 1886, and Dr. Obalinski, "Weiner Med. Press," 1886, Nos. 4 to 12.)

The operation of laparotomy is fully described under that heading. The incision in abdominal obstruction is preferably made in the middle line, and no longer than absolutely necessary. Exploration with two fingers through a small incision may first be tried, the bowel being followed in the direction of greater distension and congestion; this failing to find the point of obstruction the hand may be inserted, the region of the cæcum receiving special attention; but this failing, the opening may have to be enlarged and the distended coils allowed to protrude under large flat warm antiseptic sponges. Mr. Treves deprecates exposure of bowel, and recommends that the collapsed gut be traced to the seat of obstruction. The distended intestine may with advantage be emptied by aspiration or trochar or by incision (Greig Smith) before being returned. (See "Beilage Zum Centralblatt für Chir.," 1887, No. 25, and "Abdominal Surgery," by Greig Smith, p. 379.)

Having found the cause, the treatment will depend on circumstances, slender bands may be torn through ("Brit. Med. Journ.," Aug. 29, 1885), and larger bands may be divided between ligatures. (Dr. Williamson, "Brit. Med. Journ.," May 21, 1887.)

If Meckel's diverticulum be the cause of strangulation it will require division. If pervious, the ends will require to be treated by Lembert's suture: (the writer had to divide a diverticulum existing as a canal three-quarters of an inch across). In a case reported by M. McGill, the strangled bowel was reduced without dividing the patent canal.

In strangulation through slits and apertures the hernia must be reduced (*vide* "Brit. Med. Journ.," p. 421, Aug. 20, 1887); volvulus must be reduced if possible; if not, enterostomy or colotomy or resection will have to be performed. (See successful case by Mr. Stonham, May 21, 1887, "Brit. Med. Journ.," also fatal case by Dr. Lammiman, "Brit. Med. Journ.," Oct. 15, 1887.)

In intussusception, the invagination should be reduced if possible; but if not, resection must be performed and an artificial anus established, or the ends of the bowel sutured and returned. (See paper by Mr. L. Knaggs, "Lancet," June 4, 1887, of thirty-seven collected cases eight were cured by laparotomy; see also successful case by Mr. Carver, "Brit. Med. Journ." April 16, 1887; see Mr. Barker, "Lancet," May 14, 1887.)

If the obstruction be due to a foreign body, *e.g.*, gall-stone, the bowel may have to be incised for its removal, and either sutured and returned, or an artificial anus formed temporarily. See case reported by Dr. Allen, "Lancet," April 30, 1887; Vide "Lancet," Dec. 3rd, 1887, for successful case by Mr. T. Smith, and in the same journal for Dec. 10th is a letter from Mr. Lawson, in it describing a method of breaking up a gall-stone by means of a needle introduced through the coats of the bowel, instead of performing enterotomy for its removal.

In cases of stricture of the small intestine, enterostomy or resection may be performed. See Treves, "Lancet," Oct. 29, 1887, where enterostomy is advised as a primary proceeding and resection as a later operation. If the stricture be in the large bowel, colotomy, lumbar or inguinal, will be called for at first, and subsequently enterectomy may be considered. (See Mr. Allingham, Junr., on "Inguinal Colotomy," "Lancet," Oct. 22, 1887; see "Lancet," July 30, 1887, for papers by Mr. Thornton and Dr. Ball; see Mr. B. Pitts, "Brit. Med. Journ.," April 30, 1887.)

INTESTINAL SURGERY. *A. W. Mayo Robson, F.R.C.S.*

Enterotomy or Enterostomy, known as Nelaton's operation, is usually performed in the right iliac or inguinal region, the presenting piece of distended bowel being drawn to the surface and fixed there by silk sutures. At present it is only performed when the cause of obstruction cannot be found, or, if found when it cannot be removed; or, as a means of relief when the patient would be unable to survive a longer operation. (See Dr. Malins, "Brit. Med. Journ.," Feb., 1883.)

It may be performed in two stages if there be time, but, in urgent cases, the bowel must be opened at once.

RESECTION OF INTESTINE, "Enterectomy or Colectomy." ("Reichel, Deutche Zeitschrift für Chir.," 1883, p. 230). Of one-hundred and twenty-one cases of resection of bowel, fifty-eight died, fifty-eight were cured, and five recovered with fæcal fistula. (*Vide* Haslam, "Resection and Suture of Intestine," "Birm. Med. Rev.," Feb. 1887.)

In cases of obstruction it is better to relieve by enterostomy, and at a second operation, to perform resection. It may be called for,—

(*a*) In cases of gangrene, caused by strangulation of bowel either from internal or external hernia, or from intussusception. (See case by Mr. R. Parker, Jan. 22, 1887, "Brit. Med. Journ."; see "Brit. Med. Journ.," Oct. 3, 1885.)

(*b*) In stricture of bowel, whether simple or malignant; being contra-indicated, if the patient's strength be so undermined that he would be

unable to survive a prolonged operation ; and in malignant stricture if the whole of the disease cannot be removed. (See case by Mr. B. Pitts, "Brit. Med. Journ.," April 30, 1887.)

(*c*) In case of perforative ulceration of bowel arising from constriction.

(*d*) In intussusception, where the bowel cannot be reduced.

(*e*) In cases of fæcal fistula, where all minor modes of treatment have failed. (See "Fæcal Fistula.")

Operation. — The bowel to be resected must be isolated with aseptic sponges and clamped by Makins', Treves' or Bishop's clamp on either side of the portion to be removed. After excision of the gut, together with a triangular portion of mesentery, the ends of the bowel, as well as the edges of the cut omentum, are brought into apposition and sutured. The parts are then gently cleansed and returned after resection, the ends are brought to the surface so as to make an artificial anus temporarily, the two tubes being united at a future operation.

ENTERORRAPHY or suturing of bowel. Lembert's suture is the one most generally employed ; it being easy of application and efficient in bringing together serous surfaces. Czerny placed a second row of sutures inside Lembert's, and Gussenbauer combined the two in one suture. Mr. Bishop has collected thirty-three distinct methods. (See "Medical Chronicle," Sept. 1885 ; see also Greig Smith on "Abdominal Surgery," p. 412 ; also Sir W. MacCormack on "Abdominal Section, 1877, epitomised in "Lancet," May 7, 1887 ; also Treves, "Intestinal Obstruction," p. 481.)

In the "New York Med. Journ.," March 19, 1887, is a paper by Dr. Wyeth, on "Laparotomy and Intestinal suture."

Dr. Senn read an original paper at the International Congress in Washington, on "Experimental Contributions to Intestinal Surgery," which is epitomised in the "Lancet" for Oct. 8, 1887. He describes a new form of Enterorraphy by the rubber ring method, and deals with wounds of the intestine by omental grafting.

For the "Histology of United Intestine," see "Med. Chron.," Oct. 1887, paper by Mr. Bishop.

For the "Suture of Appolito," see "Med. Chron.," Jan. 1887.

COLOTOMY may be performed in the right or left lumbar, or in the inguinal regions. It may be performed : (1,) As a curative measure—in ulceration of the rectum after failure of other means ; in distension of colon with atony of its walls ; in volvulus of sigmoid flexure ; in recto-vesical fistula. (2,) To ward off impending death, as in obstruc-

tion in the rectum or colon. (3,) To ameliorate symptoms, as in cancer of rectum and of the prostate. (See paper by Mr. H. Fenwick, "Brit. Med. Journ.," Oct. 22, 1887.)

The mortality, according to Dr. Ball, is 38 per cent. in lumbar colotomy, 53 per cent. in inguinal; but improved methods of wound treatment have considerably lessened the mortality of both methods.

Mr. Treves, "Anatomy of Intestinal Canal and Peritoneum in Man," shows that the ascending colon may be opened from behind with less danger to the peritoneum than can the descending; for in 36 per cent. of the bodies he examined, he found a descending, and in only 26 per cent. an ascending meso-colon.

Inguinal colotomy has been strongly urged by Mr. Allingham, Junr., in an article published in the "Brit. Med. Journ." for Oct. 22, 1887, in which paper he advocates a method of shutting off the lower bowel by bringing the colon well up into the wound and creating a spur between the upper and lower canals.

Mr. Lund has invented a useful inflator for distending the bowel when the colon cannot be found in the lumbar operation.

Some operators of large experience do not hesitate to open the peritoneum if there be any difficulty in finding the colon, and after finding it, to close the opening in the serous sac by catgut sutures.

Madelung, ("Central. für Chir.," No. 23, 1884,) recommends that the colon be completely cut through; the lower opening being closed and returned, the upper opening being sutured to the skin. If there were obstruction below, this proceeding would present manifest disadvantages. No truss has been made, for use after the colotomy wound has healed, which supersedes the simple pad of antiseptic wool kept in place by a binder. For description of operation, see "Abdominal Surgery," by Greig Smith, p. 394.

Fæcal Fistula and Artificial Anus.

Definition.—Any abdominal opening discharging fæcal matter is a fæcal fistula; but the opening left after enterotomy, or enterectomy, or colotomy is known as an artificial anus.

Indications for operation.—(1,) Emaciation from escape of chyle if the opening be high up in the bowel. (2,) Patients desiring to be rid of a worrying complaint. Where the perforated bowel is near the surface it is amenable to operation, being more easily closed when there is a mere bending of the gut with a hole in its side, than where, as after enterectomy there are two parallel tubes placed side by side and separated by a spur.

There are five methods of cure: (1,) By plastic operation, either by

flap or by bringing together the refreshed edges by means of sutures (2,) By pressure of truss, or by bringing the granulating edges together with strapping. (3,) By the application of caustic, or of the actual cautery to the edges of the fistula. (4,) Where there is a "spur,"—(*a*,) by depressing it by means of rubber tubing passed into the upper and lower openings; (*b*,) by gradual division of the spur by ligature; (*c*,) by destruction of the spur by Dupuytren's enterotome. (5,) Resection and suture of intestine after all other means have failed. For details, see case by Mr. Makins, ("St. Thos. Hosp. Report," vol. xiii., p. 181. See Hardie, "Med. Chronicle," Jan. 1885.)

JAUNDICE. (See "Liver," Disorders of.)

JOINTS (Diseases of). *J. Hutchinson, Junr., F.R.C.S.*

Disease of the Sacro-iliac Synchondrosis is a well recognized, though rare affection, and its treatment is as difficult as that of tubercular disease of the hip. The chief symptoms are (1,) Apparent lengthening of the lower limb with abduction and eversion, the former being due to tilting of the pelvis; (2,) A sensation of "giving way" on walking or standing, with considerable pain often referred down the sciatic nerve; (3,) If an abscess forms it will very probably point at the back of the sacrum or in the gluteal region, but may burrow very extensively. The best treatment, if suppuration has occurred, is to cut down upon the joint, to scrape its surface with a Volkman's spoon, and to disinfect the cavity with one of the ordinary antiseptic solutions. Drainage, antiseptic dressings, and rest in bed complete the treatment, every possible means being taken to keep up the patient's strength. Mr. Gant reports two cases treated in this manner, which ended in cure ("Lancet," August 27, 1887).

The fact of there being a large bursa between the hip-joint and the ilio-psoas tendon is well known, and the occasional enlargement of this bursa is mentioned by most writers; but it must be admitted that its occurrence is extremely rare. A good example is described by Sprengel ("Centralblatt für Chirurgie," No. 1, 1887). A man, aged 51, developed a considerable swelling in the right groin, with pain about the knee and discomfort in walking, so that he bent the hip considerably, and was ultimately obliged to give up work. The femoral vessels were displaced inwards, a fact which made the possibility of a glandular abscess very unlikely. Hip disease was excluded by the absence of its typical symptoms, and there was no reason to suspect disease of the vertebræ or pelvis. After clear fluid had been aspirated, the cyst was cut down upon and found to communicate with the hip-joint through an opening in the capsule. It was drained antiseptically, and the patient

made a rapid and complete recovery. It may be noted that the crural nerve was pushed forwards by the bursa, in consequence of which the man had complained of shooting pains along the thigh and about the knee.

The Treatment of Hæmorrhagic Effusion into the Knee-joint by Puncture.—This method has come into general use of late in many German and French Hospitals, and has also frequently been tried in England. According to Dr. Bondesen ("Centralblatt fur Chirurgie," 1887, p. 50), who bases his conclusions on a large number of cases, antiseptic puncture of the knee after blood has been effused into it from some injury, is attended by very good results. By its means the joint is sooner restored to complete functional use, and the recovery is more complete than that following the application of ice, etc. After the blood and synovia are let out, the joint is usually washed out with **Carbolic** or **Sublimate Solution.** In not one of the fifty-seven cases mentioned did any untoward accident follow the operation.

Excision of the Knee.—Improvements in the technique of this operation continue to be suggested, although probably it is performed much less often than was the case a few years ago, at any rate in private practice. Mr. Mitchell Banks advocates a modification of the dovetailing procedure, instead of making the femoral section pointed and fitting it into a corresponding hollow made in the tibia. He uses a fine saw, and rounds off the end of the femur, even sparing the posterior crucial ligament. A suitable hollow is then sawn out in the tibia. He advises the removal of the patella. Mr. Allingham, junr., on the other hand, divides the knee-cap and extensor tendon vertically, and performs the section of the femur and tibia through the gap thus produced, subsequently suturing together the halves of the patella. In any case it is essential that every particle of the diseased synovial membrane and bone should be removed, and perfect fixation of the bones secured. Mr. Gant's splints (one at the back of the limb, the other along the whole length of the outside, with a foot-piece attached) are recommended by several surgeons, and Mr. Marsh has had good results from pegging together the cut surfaces with bone needles, which are left in permanently. Mr. Morrant Baker has used strong steel needles in the same manner; they, however, require subsequent removal.

Mr. Lucas-Championnière, who reports eleven cases of excision of the knee, urges the strictest attention to antiseptic precautions, and considers that the operation need not be limited to early life: he has successfully operated in one case aged 54.

Caries of the Spine.—It will be remembered that a few years ago Mr. F. Treves brought forward a new operation for caries of the lumbar spine, accompanied by psoas abscess. By careful dissection from the back the abscess is opened through the erector spinæ muscle, any sequestrum is removed, and the carious bone surface scraped. Efficient drainage is thus obviously secured by the most direct route. Dr. Podres reports a case of caries of the cervical spine treated in the same manner. The incision was made behind the sterno-mastoid and along the brachial plexus, the carious sixth and seventh vertebræ were scraped, and after a repetition of the operation six months later, the patient made a good recovery.

Drainage of the Neck of the Femur.—In a certain number of cases of hip-disease (those in which the disease begins in the neck of the femur), Mr. Thornley Stoker, following Dr. Kirkpatrick, advocates boring through the great trochanter, and inserting a drainage tube. The difficulty of selecting appropriate cases will probably prevent this operation being often performed.

KELOID. *N. Whitelaw Bourns, M.D.*

Dr. Crocker, from microscopical examination, considers the division into true and false to be without anatomical or clinical foundation. He confirms the opinion that the blood vessels are affected far beyond the growth, therefore wide removal is necessary. ("British Medical Journal," September, 1886.)

Guyard obtained good results in seven cases of keloid, by repeated scarifications at fixed intervals. ("Thése de Paris," 1886. "Monatsh für Prakt. Derm," 1887, No. 10).

Hardaway recommends **Electrolysis**, the needle being passed into and through the base of the growth. ("Medical Times," May, 1886).

KIDNEY DISEASES (General). *Robert Saundby, M.D.*

(See "Albuminuria," "Bright's Disease," "Diabetes," "Hæmaturia," "Urine.")

Moveable kidney. This condition of kidney is by no means rare, but is often overlooked as it occurs in all degrees from a slight loosening which permits rotation on its horizontal axis to the wandering kidney to be felt through the abdominal walls, even below the umbilicus.

The slighter degrees of mobility are characterised by pain in the lumbar region on the affected side, and the presence of traces of albumen and blood in the urine. Where these symptoms occur in a patient presenting no other sign of Bright's disease, above all, if they can be traced to an injury or occur in a woman who has borne many children, mobile kidney may be suspected.

In the more marked cases where a tumour is present it is well to remember that all globular mobile tumours are not kidney. In two or three cases they have turned out to be gall-bladder, and may be omental or pyloric cancer.

The treatment is the same for all degrees, namely, a suitable abdominal belt. This may be improvised by a convex pad of cotton wool or horse hair and a flannel binder, but in people with pendulous bellies a more substantial apparatus is needed. The following belt, described by Dr. Apolant, gives a good idea of what is required.

The bandage used to reduce the kidney was simply a belt fitted to the abdomen with appendages of india-rubber webbing so arranged as to grasp the hypogastrium. To prevent it slipping up, two covered india-rubber gas-tubes secured it to the thighs. Inside the bandage, in a position somewhat below the normal position of the kidney, a firmly padded convex leather cushion, somewhat larger than the fist, was fixed, which exercised pressure on a considerable area of the hypogastrium over the very yielding intestines. This pressure, while being pretty strong and constant, must be of such a nature that the hypogastrium can expand and contract during breathing. This is effected by the india-rubber. ("Apolant Deutcher Med.-Wochenschrift," No. 41, 1886.)

Pyelitis, Pyonephrosis, and Renal Calculus.

Pyelitis is a catarrhal affection of the pelvis of the kidney, giving rise usually to pain in the loin on the affected side, and always to the presence of more or less pus in the urine. The urine is acid and does not contain mucus, two characters which generally distinguish it from the urine of cystitis. Oxalates are very frequently present. The condition may be tubercular, and this should be suspected in members of phthisical families, especially if there is evidence of tubercular deposits elsewhere. Non-tubercular cases are often very obstinate, but apart from the pain may not be of serious importance.

The best treatment is **Oil of Sandal Wood** in capsules three times a day, with **Salutaris Water** or **Potash Imperial** (bitartrate of potash ℥ss to water Oj sweetened to taste) as a drink, abstinence from hard water and from alcohol. If oxalates are present **Nitro-muriatic Acid** may be tried, and this failing a course of **Vichy Water** (Celestins or Haute Rive) half-a-bottle to a bottle daily, taken with lemon juice.

Pyelitis due to calculus will be discussed hereafter.

Pyonephrosis is a further stage of pyelitis where the ureter is blocked, and the kidney enlarges to form a sacculated abscess. This

may be due to calculus or tubercle. Drugs are of no use, and the question of a surgical operation must be faced. The cyst may be opened and drained or extirpated *en masse*. As a rule the former is first tried. The prospect of permanent benefit from surgical interference depends upon the cause. If this is a calculus a cure may be hoped for; if tubercle the result is unsatisfactory. A history of the passage of renal calculi or a decided gouty diathesis favours the prospect of the case.

When tubercle is present the other kidney is nearly always diseased; and if we could be sure of our diagnosis such cases would be better let alone.

Hydronephrosis.—When the ureter is blocked by a calculus, the secretion of urine goes on in the kidney until the internal pressure puts a stop to the secretion, while at the same time the tissues of the kidney commence to undergo a form of atrophy, which converts the organ in time into a huge multilocular cyst.

TREATMENT.—The fluid contents should be drawn off by an aspirator, and the case watched; while the treatment for renal calculus should be instituted (see below). Such cases are apt to become purulent (see Pyonephrosis), and if not cured by aspiration, require further surgical treatment. If drained, a urinary fistula may follow, part of the kidney tissue remaining still active, but drainage should be tried before total extirpation is resorted to. The propriety of operation must depend on the degree of discomfort occasioned by the tumour, as such a condition is not necessarily dangerous to life, and may either remain stationary or undergo a spontaneous cure by the calculus passing onwards, or tumours may disappear by absorption of the contents and atrophy of the walls.

Renal Calculus.—Renal calculi are generally composed of uric acid or oxalate of lime. The former are generally encrusted with phosphates. A phosphatic calculus may form on a nucleus of blood clot. The symptoms are pain in the loin on the affected side, hæmaturia, especially after exertion, with more or less pus in the urine. The pain is characteristic when it shoots down into the testicle. Attacks of vomiting may occur. The diagnosis is often very difficult. A history of the passage of stones is of great assistance. Pretty free hæmaturia occuring from time to time is a symptom which is most important to the diagnosis. Great and very persistent pain is very significant, but is often absent. Simple pyelitis should not be mistaken for calculus, as there is no hæmaturia; but the two often occur together. Cancer of the kidney may closely resemble calculus, but the hæmaturia is more profuse and persistent.

TREATMENT.—**Distilled Water** and **Salutaris Water** must be substituted for ordinary drinking water in all beverages. The uric acid diathesis, if present, must be combated by abstinence from butchers' meat, sugar, and alcohol. Pure milk diet is recommended by more than one authority. If there is much pyelitis, **Sandal Wood Oil** in capsules should be administered.

During an attack of renal colic, a hot bath, or very hot applications to the seat of pain, with **Morphia** injections should be employed.

The radical cure may be effected by surgical means. This is indicated, (1,) In cases where the pain is very great and long persistent; (2,) Where increased pyelitis is being set up; (3,) Where pyonephrosis exists.

A very small stone may cause great pain, yet be overlooked when the kidney is opened, and subsequently pass *per vias naturales*, therefore do not be in a hurry to operate for pain only.

Cancer.—In a handbook of treatment, this condition calls for no special notice. Its differential diagnosis from calculus has been already alluded to (*vide supra*). Sarcoma of the kidney occurs not infrequently in young children, and forms a huge tumour. Hæmaturia is present, but the child remains often curiously well nourished and healthy for months after the mass can be plainly seen and felt.

Tubercle of Kidney.—This has been alluded to under pyelitis, which it generally sets up. Miliary tubercles may occur in the kidneys without symptoms in general tuberculosis. If they break down pus and blood will appear in the urine, together with shreds of renal tissue. The diagnosis must depend greatly on evidence of tubercle elsewhere or of constitutional predisposition. The treatment should consist of **Cod Liver Oil,** tonics, of which **Quinine** takes the first place, and the general remedies recommended for pyelitis.

LABOUR. *W. R. Dakin, M.D., B.S.*

Importance of moment of Rupture of Membranes.—Dr. Champneys in a paper on 'Some causes of retention of membranes' ("London Obstet. Trans.," 1887), gives an analysis of 90 cases, illustrating the importance of the time of rupture of the membranes, the presence or absence of prolapse of the bag before delivery, and of the membranes (amnion) after delivery, as bearing on the complete or incomplete detachment and expulsion of the membranes. He points out that the membranes as a whole owe their toughness to the amnion, and the cohesion of amnion and chorion is the safe-guard against retention of the latter. His conclusions are :—

1. The mechanism of detachment and expulsion of the membranes

is in three stages : (*a*) Separation of lower pole of ovum by retraction of lower uterine segment during the "premonitory" stages of labour. This requires a complete 'bag of waters.' (*b*) Wrinkling and partial separation of the coherent membranes by diminution of the internal surface of the uterus. This requires some escape of the waters. (*c*) Peeling off of membranes by traction of descending placenta. This requires evacuation of the uterus.

2. Conditions interfering with the proper mechanism are thus :—Too early or too late rupturing of membranes ; prolapse of bag, which will consist of amnion alone, and interfere with (*b*) ; prolapse of membranes (amnion) after delivery beyond the vulva, and the separation of chorion and amnion ; retention of a ring of membranes round the lower part of the uterus ; retention of the whole chorion.

The practical application of these conclusions is as follows :—

The membranes should be preserved till the os is fully dilated. After this they are not only useless, but favour retention. They should therefore be ruptured on full dilatation. In vertex cases, if the head has settled over the os, the advance of a smooth sausage-shaped bag points to advance of amnion alone, which favours retention of chorion, and this separation of the two membranes not only points to adhesion of chorion, but also renders its removal more difficult.

When the membranes advance low in a vertex case, the chorion should be carefully examined as to its entirety after delivery.

Placenta Prævia.—The treatment of this abnormality seems to have become a settled question. What Braxton Hicks taught in 1860 is now adopted as the most scientific treatment. His method is that of turning by the feet by the bipolar operation, and bringing one leg down into the os. Bleeding is then found to cease, and the case may generally be left to nature. The fingers or finger are then introduced past the nearest edge of the placenta. The placental site, the most vulnerable area, is thus interfered with, and exposed to septic influences, as little and for as short a time as possible ; instead of, as in the methods of Simpson and Barnes, being laid bare during the whole course of labour. There is also less danger of laceration of the vascular cervix by this method.

When a midwife has to treat this condition, pending the arrival of a medical man, her duty is to plug the vagina carefully with some antiseptic material. This procedure excites contraction, producing dilatation of the os, controls hæmorrhage, and to some extent helps to preserve the membranes entire for turning.

Cocaine in Midwifery.—Dr. Dabbs, of Shanklin, after three years'

experience in the use of **Cocaine**, finds a 4 % solution in **Castor Oil** efficient. A plug is soaked in this and placed in the os, being renewed every half hour till full dilatation has occurred. He also finds it very useful applied in a 12 % solution to the vulva and vagina in cases of perinæal regidity.

Impacted Transverse Presentation. Amputation of Procident Arm.—Dr. Herman ("Lond. Obstet. Trans.," 1886) records three cases of impacted transverse presentation, where he noticed that the shoulder of the prolapsed arm was caught beneath the contracted ring above the os externum, thus preventing version from being performed. Numerous cases have been published in the journals of success only following amputation of the procident arm. He merely pushed, by direct pressure on it, the point of the shoulder towards the centre of the cervical canal, and was successful. In the discussion which followed, Dr. Galabin said he had never failed to get the head to rise by pulling at the foot and pushing up the shoulder alternately, and not simultaneously.

Causes of Delay in Second Stage.—Ahlfeld ("Deutsch. Med. Woch."), by placing a manometer in the sigmoid flexure of a breech-presenting fœtus, and recording the pressure at various stages, came to the conclusion that the commonest cause of inertia in the second stage is that the uterus has undergone so much retraction, and has thus lost so much of its expelling power that it is ineffectual against the resistance of the perinæum and undilated vulvar fissure, and at the same time the abdominal muscles act only partially, or not at all, especially in primipara, owing to the small extent to which the uterus there bulges forward. He advises the body and limbs to be fixed firmly so as to allow the abdominal muscles full play, two fingers to be used per anum to press the head towards the vulva, especially between the pains; and lastly, the woman to be placed in a sort of improvised labour-chair, formed by placing two chairs side by side, with the hind legs of one touching the hind legs of the other, and the front legs separated by an interval. This speedily causes the abdominal muscles to act. The judicious application of a binder is very important. These means will in a great number of cases obviate forceps, a most desirable end.

The right moment for Version and for Extraction. Winter ("Zeitschr. f. Geb. u. Gyn.") considers that version should be delayed till it can be followed by immediate extraction, *i.e.*, till the os is fully dilated. He combats the view that under ordinary circumstances delay in turning after the membranes have ruptured can produce either (1,) Intra-uterine

death of the child or (2,) Increased difficulty in turning. He gives numbers and instances in support of his statement. (3,) Air may be prevented from entering the uterus after the rupture, and while the os is, dilating by keeping the patient quiet on her back. He says these three dangers (including tetanus uteri) and another one, viz., dangerous thinning and rupture of the lower segment of the uterus, are all avoided by not missing the moment of full dilatation, and by not interfering or giving ergot before.

Causes which render delay dangerous when version has once been performed are,—the risk of compression of the cord, the entrance of air during difficult version, and the detachment of the placenta which often accompanies or follows version.

Turning must be performed earlier, however, in cases of placenta prævia, marked thinning of lower uterine segment, prolapse of cord, asphyxia of child, commencing septic infection during labour, and pure uterine inertia where all means have failed to excite contraction.

Treatment of after-coming head.—Koppe, Lomer and Freudenberg have written on the subject recently.

The first considers that the usual downward pressure applied to the vertex through the hypogastrium tends to increase that diameter of the head which it is desirable to contract, by flattening the head.—First, making sure that the long diameter of the head is transverse in the pelvis, and the bladder empty, he presses the head with the palm of his hand back against the last lumbar vertebra for some seconds, the head often giving a distinct sensation of yielding. The delivery is then accomplished in the usual way with great ease. He says he does in a few seconds what nature takes hours to do.

He objects to forceps and says that time is wasted, and that the head is compressed antero-posteriorly and expanded laterally, thus filling up the conjugate.

Freudenberg considers that forceps are of great value when expression fails, and he thinks no more time is wasted over them than is required to empty the bladder in Koppe's method. He considers also that forceps exert more traction than compression, as shown by the fact that the head occasionally rotates in forceps, without the latter rotating. He thinks their application is perfectly easy, as no doubt it is, especially if the head is in the pelvis.

Lomer thinks expression will generally succeed, but that forceps are a most valuable resource.

Koppe's method sounds rather destructive and would need much judgment.

Craniotomy, Cæsarian section and Porro's operation.—During the last year opinion has been more settled that Cæsarian section by the improved method is the best operation in all cases where it is possible, and that Porro's operation should be resorted to only under certain circumstances (mentioned below). It is conceded that the temporary favour enjoyed by the later method was due almost entirely to the antiseptic principles which were combined with it on its first introduction, and the, in consequence, immensely lower death-rate than that of Cæsarian section up to that date. But now the older operation when performed with all antiseptic precautions and under suitable circumstances has, according to Leopold's latest statistics, an almost uniform success, which at no time belonged to Porro, and which quite surpasses the smallest percentage maternal death-rate yielded by craniotomy in favourable cases, to say nothing of the fact that it is exceptional for the child not to be saved.

Leopold's latest published method of performing the operation is as follows: The smallest abdominal incision is made which is judged capable of allowing the uterus and its contents to be brought outside, and one or two sutures passed through the upper end of the wound and held untied. The uterus is then drawn out, and the abdominal wound above it closed by the sutures, and a flat sponge and mackintosh cloth arranged round the uterus, which is thus kept warm, and amniotic fluid and blood are prevented from entering the abdomen. A rubber tube is now put loosely round the cervix as low as possible, and the uterus is opened by a median incision beginning near its fundus and ending well above the point where the peritoneum leaves its anterior surface, at which spot there are many large vessels. The child is extracted and separated. The rubber tube is now tightened and the placenta and membranes removed. The uterus is washed out with a 1 in 5000 sublimate solution, the cavity dusted with **Iodoform**, and **Ergotin** administered if its walls begin to be flabby. Silver (or better, chromicised catgut) sutures, generally about eight or ten, are introduced so as to include all the muscle of the uterus, leaving the decidual layer untouched, and so making no path from the interior to the exterior. These are tightened up and the sero-serous sutures (also chromic gut) introduced in the following way:—The needle enters the peritoneum ½ in. from the edge of the wound, is carried parallel to the wound under the peritoneum from about ½ in. and brought out. It is then taken across the wound and introduced the same distance from the edge on the opposite side, run under as before, only in the reverse direction and brought out opposite the original point of entrance.

When its ends are brought together and tied, the peritoneal surfaces are in contact over a large area. Five or six of these sutures are employed. The elastic tube is now removed, and any oozing, of which there is usually none, dealt with. The uterus is induced to contract, and sponged over with a warm 1 in 5000 sublimate solution, the sponge and cloth removed, and if no fluid or blood has reached the abdominal cavity, the uterus is returned and the abdomen stitched up.

The cases most suited for this operation are those where the uterus (body at all events) is normal, or nearly so—as in most forms of considerably contracted pelvis, otherwise intractable pelvic tumours impeding delivery, cancer of pelvic organs, cicatricial vagina, rupture of uterus.

In addition to the all-important advantage of low death-rate, are those of not depriving the woman of her uterus and ovaries, of less shock, and of a much simpler operation.

The advantages of Porro are—The operation is under personal control throughout, conception is prevented, and when the uterus is the seat of many dangerously-situated fiboids, or in a completely exhausted, bruised, and inflamed state from prolonged labour, &c., with an extremely contracted pelvis, or is the subject of cancer of the body, it is removed. It should therefore be performed under the last three conditions; also in cases of severe, much lacerated rupture, where there is enough neck left sound to hold the ligature. In osteomalacia it has been found by Kleinwächter ("Zeitschr. f. Geb. u. Gyn." Bd. xii.) and this is allowed by Sänger, that the removal of uterus and ovaries exerts a favourable influence over the disease.

Dr. Swayne ("Bristol Med. Chir. Journal," March, 1887) discusses the question of the abolition of craniotomy which has been before the profession lately, and concludes that craniotomy is the proper operation after attempts have been made, as they should be, for some time, to deliver by forceps, &c., in a pelvis of 3-4 in. conjugate, and have proved ineffectual. The uterus as mentioned above is in all probability too exhausted and bruised for Cæsarean section and the mother's condition is not less threatening, and craniotomy is an easy operation in such a case. It is otherwise however, when the conjugate is between 3 in. and 2 in. He considers Cæsarean section should be done then, unless the hygienic and other surroundings of the patient prevent aseptic cleanliness. Under 2 in. abdominal section is the only operation.

Of course, if the mother is under observation during pregnancy, premature labour at an appropriate period will be induced.

Ruptured Uterus. — In the discussion following papers on this subject by Dr. Swayne and Dr. R. Cox at the London Obstetrical Society (vol. xxviii.) the treatment of this accident was touched upon. As regards the child escaped into the abdomen, all the Fellows (who spoke) agreed that the only sound treatment was to perform abdominal section, and not to drag the fœtus back through the rent in the uterus. Section should be done at once. Dr. Galabin considered that Porro's operation would be very rarely advisable. In all cases he had met with, the rent had commenced in the vagina or in the thinned layer of the uterine segment, thence extending upwards. It would not then be possible to remove the whole of the rent by Porro. Dr. Champneys was convinced that treatment as after a Cæsarean section (Sänger and Leopold) would eventually prove the most successful of any. Dr. Horrocks thought that the character of the torn edge would have much influence in the result of this treatment.

Puerperal Eclampsia.—Dr. Byers, of Philadelphia, in a clinical lecture on this subject alludes to the connection between Bright's disease and convulsions. He thinks in the majority of cases the former is the direct cause of the latter. A girl of 17 to 20 with Bright's disease, who marries, he looks upon as almost sure to die in her first confinement, this class of case being much more fatal than that in which the nephritis is acquired during pregnancy. He follows Lusk and many other authorities in recommending bleeding to the extent of from 8 to 16 oz., and says more success may be anticipated in cases of puerperal albuminuria than in those of simple nephritis, as with removal of the fœtus, a real factor in the production of the blood-condition is removed also.

[Eventually this is so, but for a period of days the blood probably receives more waste products after delivery than at any time during pregnancy.]

Dr. Maguire (Lancet) found in a case of puerperal albuminuria, which had proceeded to delivery without any mishap, that the precipitates with HNO_3 and heat were really all globulin as in some other cases of functional albuminuria, and not serum-albumin. Thus there is, probably, no kidney mischief. It is important in case albuminuria is detected during pregnancy to diagnose this class of case from real Bright's disease, as the latter is almost sure to cause trouble. The way he separates the globulin from the serum-albumin is to exactly neutralize the urine with Liq. **Potassa**, and saturate it with $Mg\ SO_4$, by standing it over crystals in excess in a warm place for 24 hours. The globulin is thrown down as a precipitate soluble in

water. Filter, wash the filter with a saturated solution of $Mg\,SO_4$. Dissolve the residue in water. The serum-albumin is in the filtrate. Both can be tested with HNO_3. Tube casts are, of course, important evidence of renal disease, as also the state of the heart or tissues. The subject has not as yet been worked out.

Post-Partum Hæmorrhage.—Local effects of hot and cold water.—Milne Murray has made some most important researches as to the relative effects of hot, warm, and cold water, on unstriped muscular fibre, experimenting on the uteri of rabbits. His results are shown well in the following table, omitting the effect of tepid water:

Cold (32° to 60° Fah.)	*Hot* (110° to 120° Fah.)
Latent period, marked.	Latent period, absent or very short.
Contraction, slow.	Contraction, rapid.
Time taken to relax: thrice duration of contraction period.	Time taken to relax: twelve to twenty-four times contraction period.
Loss of initial efficiency in four experiments was $\frac{1}{5}$.	*Gain* of initial efficiency in four experiments was 4 times.

Effect on Vessels.—Hot water contracts blood-vessels and arrests hæmorrhage from the smaller arteries.

Tepid water (100° to 70° Fah.) dilates blood-vessels and promotes hæmorrhage.

Cold water checks hæmorrhage by constricting blood-vessels, but only temporarily.

He made the following instructive experiment on the pregnant uterus of a doe rabbit. It was exposed, and hot water (115° F.) played on to one side, cold (40°) on to the other, for four minutes. At first both sides became pale. At the end of four minutes the hot water side was still anæmic; the other was beginning to redden. In four more minutes the hot water side was still anæmic; the cold, bright red. It is thus evident that a hot water is a most rapid and lasting agent, and particularly applicable to *post-partum hæmorrhage*, and will exert its effects if persevered in as well as or better than the alternate use of hot and cold water, often recommended. It also has the advantage of communicating no shock, but stimulus, to the system.

Resuscitation of still-born children.—Dr. Champneys, ("Intern. Journ. Med. Sci."), mentions Cazeaux's division of cases of this sort into two states or stages; the first, a livid condition in which the muscular tone is not lost; the second, a condition of syncope where the surface is pale and the muscular tone lost. In the former state the prognosis

is good, and the child will often recover with the least possible assistance, such as clearing the air passages and rubbing the spine. In the pale stage of asphyxia all slappings and bathings are useless till the child is raised out of its flabby condition. The state of the pupils is important in prognosis ; they are widely dilated in profound asphyxia. The re-establishment of circulation has no effect on them, but in the production of respiration they at once contract.

He advises that the cord be not immediately tied in any case unless it is necessary for manipulations. It is a mistake to let a little blood run away from the cord as has been recommended, as the circulation is still fœtal, and there is no analogy to venous engorgement as in adults. Moreover, the cases, those of lividity, in which it is recommended, generally recover with little trouble ; and this treatment has never been suggested for the pale cases, in which there is the same asphyxia to a greater degree of danger.

Four objects are aimed at : (1,) Removal of foreign matters from the air passages ; (2,) Procuring patency of the passages ; (3) Excitation of circulation ; (4,) Ventilation of lungs.

He sums up the treatment as follows : Never hurry, it is not a question of seconds, and success depends on a fine exercise of the judgment. Make a good diagnosis—first, as to life or death ; secondly, as to the stage of asphyxia (if life is not extinct). If the child is macerated, it is obviously dead and past hope. If the heart beats ever so slowly and feebly, it is not dead. If the heart is not beating, death is not certain, unless it can be proved to be inactive for some time. If the child is livid and not flabby, it will probably come round. Wipe out its mouth and pharynx, and rub it with a soft cloth down the spine ; press gently in the cardiac region. If this produces no effect, inflate the lungs by the mouth, and then by Sylvester's method. If air enters the lungs, well and good ; if not, try Schultze's method, or insert a catheter as described above in a former part of the article. On the first sign of muscular action, plunge the child into cold water, or into alternate hot and cold baths. Vary the treatment between occasional inflations of the lungs, artificial respiration, pressure over the cardiac region, baths, irritation down the spine, according to the judgment ; remembering what may be expected of each method, and that no one will suffice for all cases. Watch for signs of resuscitation, namely, improvement in colour, in movements, in cardiac pulsations, as described. Never be content until the child breathes regularly and appears to be continually improving. Schultze's method is entered into completely in the article. ("Intern. Journ. Med. Sci.," April, 1886).

Lacerations of perinæum and vagina.—(*a*) Most common sites of rupture in vagina.

Freund, ("Gyn. Klin.," vol. i.), states that the regions of the vagina most likely to be injured in parturition are—in the fornix vaginæ, the sides (prolonged from tears in the cervix); in the middle part the posterior wall at the side of the columna rugarum, and especially that side on which the face descends; at the lower part, of course, the posterior wall and perinæum.

The parts at the side of the anterior columna rugarum are occasionally injured, especially in mento-posterior face presentations. These injuries are made more probable in cases of (1,) Cicatrices of vaginal fornix from any cause; (2,) Rigidity of vagina (lower third in elderly primiparæ); (3,) Congenital narrowness with contracted or infantile pelvis; (4,) Limited expansibility in certain places, due to *e.g.*, prominent ischial spines. The severest injuries are connected with forceps, owing to the fact that the circumference of the head is increased, the passage of the head accelerated, and the edges of the blades sometimes stand out. There is increased alteration of relative position of vaginal walls and interference with normal mechanism.

TREATMENT. — Keller ("Ar. f. Gyn. Bd." xxvi.), recommends a continuous catgut suture. He cleanses the vagina and wound with a 1 in 2,000 sublimate solution, and sews up the wound, beginning at the vaginal end with an ordinary knotted suture and carrying it back to the anus. It may be fastened there by knotting it with an interrupted suture or by tying the end to the last turn of the series. He then covers the wound with iodoform collodion. The legs are not tied together. He had most excellent results; and says the edges are brought into better contact, and kept there by the elasticity of the gut. Further, it does not need removal. In all cases suture should be performed at once.

Subcutaneous injection of ergot.—It has been found by Baunn ("Cent. f. Gyn.," No. 28, 1887) after numerous experiments, that the most satisfactory method in every way of injecting ergot is to use a weak solution, 5, or at most 10 per cent. of **Ergotine,** to just neutralize its acidity with soda, and to inject it exclusively into the muscle of the buttock, the syringe being introduced vertically. No local irritations follow.

LAPAROTOMY and ABDOMINAL SECTION.

A. W. Mayo Robson, F.R.C.S.

These are terms now used synonymously in reference to the operation of opening the abdominal cavity, either in the linea alba or through the

parietes. It is employed in various diseases and injuries of the abdominal viscera, for a description of which refer to notes on "Stomach," "Gall-bladder," "Liver," "Uterus," "Intestine," &c. For the employment of laparotomy in other cases not classified among diseases of the viscera, see "Brit. Med. Journal," April 20th, 1887, for an account of a large omental lipoma, removed by abdominal section; see "Lancet," March 26th, 1887, p. 630, for an account of laparotomy for ligature of the internal iliac artery for gluteal and sciatic aneurism; see "Lancet," April 16th, 1887, p. 175, for a paper by Dr. Pringle on the treatment of aneurism of the abdominal aorta by laparotomy and the introduction of wire into the sac; for laparotomy in perforative peritonitis, see "Med. Chronicle," Nov., 1887, and "Lancet," Jan. 15th, 1887; for laparotomy in tubercular peritonitis, see "Annals of Surgery," p. 71, July, 1887, and discussion at Clinical Society of London, Nov., 1887; for an account of the value of exploratory laparotomy, see paper in "Lancet," Nov. 13th, 1886, p. 909, by Mr. Bryant; for laparotomy in ruptured tubal pregnancy, see papers by Mr. Lawson Tait, "Brit. Med. Journal," Aug. 16th, 1884, and April 18th, 1885; for laparotomy and suture of intestine in perforating typhoid ulcer, see "Deutsche Zeitschrift f. Chir.," p. 1, Bd. 25.

In whatever cases it may be necessary to perform laparotomy, there are certain broad rules which are common to peritoneal surgery.

Whether absolute antisepticism is followed out or not, all successful operators observe the strictest cleanliness in sponges, instruments, and hands.

If carbolic spray be used, it is not allowed to play over the viscera, but is directed higher, so as to clear the air over the region of the incision.

Ligatures are rendered aseptic by boiling or by soaking in an antiseptic solution. All unnecessary exposure and chilling of the body is avoided.

The incision is made, when possible, in the middle line, and no longer than absolutely needful; so as to avoid useless exposure of viscera, and to lessen the tendency to subsequent ventral *hernia*.

Bleeding from the parietes is arrested, either by pressure forceps or by other means, before the peritoneum is opened.

After the peritoneum is opened bleeding is controlled by sponge pressure, by pressure forceps, or by ligature.

Extravasation into the peritoneal cavity of pathological fluids, or of visceral contents, is avoided by packing sponges around openings made into cysts or hollow viscera.

Peritoneal toilette is carefully performed before closing the abdominal cavity.

If the peritoneum has been unavoidably polluted by pathological fluids, or, if much blood has flowed among the viscera, the cavity may be thoroughly washed out, either with a warm mild antiseptic lotion, such as a solution of **Boracic Acid**, or a 1 in 10,000 **Perchloride of Mercury** solution; or with an aseptic fluid, such as boiled or distilled water, or with plain tap water (Lawson Tait). Whatever fluid is used, it should have a temperature of 103° to 107°. The hæmostatic effect of hot water 110° to 120° is useful when there is oozing from many bleeding points. (See article by Mr. Lawson Tait, "Methods of cleansing the peritoneum," "British Gynæcological Journal," August, 1887).

If much effusion into the peritoneum is anticipated, a glass drainage tube may be inserted, the end reaching into Douglas' pouch, but not pressing on the rectum; the tube being removed as soon as the need for drainage ceases.

In closing the wound, silk is usually employed, care being taken to include in the sutures all the layers of the abdominal wall, except muscle, and to bring together the peritoneal surfaces.

All sponges and instruments must be carefully counted before the sutures are tied.

For fuller information refer to the discussion on "Abdominal Surgery," opened by Sir Spencer Wells, at the Internat. Med. Congress, London, 1881.

The after treatment is of great importance. Shock must be counteracted by hot water bottles, and envelopment in blankets; by rectal injection of stimulants and liquid food; and by the employment of opium if needful.

The use of the catheter is avoided by some operators except in case of retention, (Tait); see also "Brit. Med. Journal," p. 918, vol. 2, 1885. By others it is used every four hours or thrice daily, strict attention being paid to the cleanliness of the catheter.

The diet for the first 24 hours consists of barley water, after which a little tea, or milk and soda water may be given; then mutton broth and milk pudding; afterwards fish; and so on till ordinary food is reached. If distension occur, it is met by a **Saline** purge (Tait), or by **Turpentine Enema**, or by passage of rectal tube.

Peritonitis is met by the administration of opiates, etc., or by re-opening the abdomen and washing out the cavity. (See paper by Dr. Malcolm, "On the condition and management of the intestine after

abdominal section," with discussion at the Royal Med. Chir. Soc., "Brit. Med. Journ.," Oct. 29th, 1887.) Vomiting during the first 24 hours may be due to the anæsthetic, later it is often due to peritonitis. Relieving distension by the methods mentioned previously, treating the peritonitis and stopping all feeding by the mouth except the sucking of a little ice, are measures usually employed. (See "Abdominal Surgery," by Greig Smith, p. 74; "The after treatment of cases of abdominal section." See also "Peritonitis" in this volume).

For information on the complication of parotitis after laparotomy, see paper by Mr. Stephen Paget, "Brit. Med. Journ.," March 19th, 1887.

For the prevention of complications after laparotomy, Professor Müller, of Berne, proposes to produce "artificial ascites," by salt solution. (See "Brit. Med. Journ.," p. 480, February 26th, 1887).

LARYNGEAL PHTHISIS.

What is it? Is there such a disease? What is the relation of bacilli to it? Can cases recover? What is the proper treatment? These questions were asked by Dr. Prosser James in the paper with which he opened the debate at the annual meeting of the British Medical Association; and the remarks he made were all through intended to elicit the opinions of others rather than to re-state his own. Having pointed out the difficulty of proving the existence of primary laryngeal phthisis he turned to the question of treatment. Incidentally referring to the remarkable recoveries he reported to the Association in 1873, he said he was not in the habit of describing his recoveries as 'cures,' but he attached great importance to treatment both general and local. As to the latter he still values sprays most highly. Anodynes and disinfectants obtained most favour. Referring to the recent recrudescence of the inclination towards surgical measures, he mentioned some catastrophes that had occurred, and offered a warning as to the liability to do injury. He appeared to lean rather to gentler treatment, though not averse to consider any possible advance. He referred to the recent manipulations and other measures with distrust, but waited further experience; and asked whether wounding the mucosa was not likely to hurry the case into the ulcerative stage.

Dr. Hunter Mackenzie looked to surgery for successful treatment, and referred to Schnitzler's attempts as well as others. He seemed to advocate also another trial of tracheotomy which was given up some time ago. Mr. Lennox Brown had no doubt the larynx might be attacked primarily. To place the patient in the most favourable

condition, and to destroy bacilli, were the indications. All surgical measures were to be deprecated; even ablation of uvula should be avoided if possible in tubercular patients. He urged abstention from useless activity. Dr. Woakes mentioned that in five cases where tracheotomy had been performed three were relieved. Mr. Stoker found insufflations of powders inferior to sprays; and scarification only produced a nidus for bacilli, or led to ulceration. Dr. Hooper, of Boston, U.S., had never seen a case of tuberculous ulceration recover, individual ulcers might heal but the disease as a whole advanced. **Cocaine** was a most useful palliative. Dr. Warden condemned useless activity and agreed that scarification led to ulceration. Dr. R. A. Hayes said recovery was not probable but possible. Sprays were the best treatment; insufflations useless; stronger measures worse.

LARYNGECTOMY. *Prosser James, M.D.*

Cases of partial or total excision have been reported during the year by Drs. Agnew, Branham, Browne and Gardner. Cohen has carefully collected the statistics and summed up ("Intern. Journ. of Surgery") the results of excision in cancer. It seems that more than one-third of the patients succumbed within a fortnight or a little over—the most common cause of death being pneumonia. After this critical period the patients seemed secure for about four months when recurrences begin to take place and fall in at intervals of a few weeks, up to perhaps a year. Some operations have been performed in cases not clearly cancerous, but these ought not to be included, as they are of a very exceptional kind.

LARYNGITIS. *Prosser James, M.D.*

The *acute* form is regarded by Dr. Foxwell ("Birm. Med. Review,") as only a symptom. It may be catarrhal or membranous. The diseases in which it occurs are *Pyrexial catarrh*, *Diphtheria*, *Measles*, *Scarlatina*, *Variola*. Injuries, such as scalds, often bring on membranous laryngitis. He gives an enema of **Castor Oil** and $\frac{1}{8}$ grain **Tartar Emetic** every 10 minutes until emesis occurs. Also 1 grain **Calomel** every four hours. In severe cases the steam tent is tried and *hot* sponges over the larynx. These failing, tracheotomy. This treatment reminds us of the older practitioners. Perhaps, for routine, it would always be better to begin with steam and *hot* sponges.

Dr. F. E. Waxham reports a case in which he tried electrolysis; and thinks, though the child died, the operation caused the expulsion of false membrane. Might not any mechanical irritation have done also as well as the electrode?

Dr. Buckmaster records a case of œdematous laryngitis treated by *hot* water at 120° F., applied by a syringe.

Chronic laryngitis, says Hunter Mackenzie ("Edin. Med. Journ.,") may be primary or consecutive, the more chronic it is the greater the probability that tubercular degeneration will supervene. Treatment must be local, and he recommends **Silver Nitrate** paintings, beginning with 30 grains to the ounce and increasing. The painting may be repeated two or three times a week. It is only in well marked cases, with thickening, that such energetic treatment is needed; and we may say that few laryngologists advise it. When nasal disease is present it should be treated. (See "Air passages, Nose.")

The Laryngitis of Typhoid Fever is one of the complications for which the attendant should be on his guard as it is often as insidious as it is formidable. Dr. Paul Koch, of Luxembourg (contribution à l'étude du laryngo-typhus), sums up the result of his studies and personal observation as follows: (1,) There is a true laryngo-typhus. It always coincides with the acute period of the general malady. (2,) If the symptoms of laryngeal stenosis become manifest during the period of reconvalescence from typhoid fever, they are the expression of the perichondritis which in general is manifested in acute maladies of long duration. (3,) Operation is indicated as soon as the symptoms of laryngeal stenosis become disquieting. (4,) Tracheotomy should always be performed low down, so as to avoid the cricoid region. (5,) It requires patience to abandon these perilaryngites and perichondrites to their natural course, which is very long, without wishing to hasten definitive recovery. (6,) If, after definitive recovery, the patient cannot dispense with the canula, there is plenty of time to employ mechanical treatment by the two routes open; and, should this not succeed, to practise a resection of a portion of the larynx. The same author reports a case of laryngeal stricture consecutive to typhoid fever, cured nine years later by tracheotomy and incandescent destruction of an interfering fold of laryngeal mucous membrane.

LARYNX (Intubation or Tubage of).

Intubation or Tubage has attracted great attention lately, especially in America, chiefly in consequence of the quiet perseverance of Dr. Joseph O'Dwyer. About 1,000 cases have been operated on with a result fully equal to tracheotomy. The operation has not however found so much favour in England, but many general practioners will no doubt see its advantages.

In the new edition of his "Laryngoscopy and Rhinoscopy." Dr.

Prosser James, gives the following account of the operation, with engravings of the instruments.

"Dr. O'Dwyer introduces a small tube of sufficient length to drop into the trachea to a point as low as that usually selected for tracheotomy. The tube is furnished with flanges to support it on the vocal cords, and is left without any silk ligature, such as Bouchut and others thought necessary. It is introduced and withdrawn as required by an instrument designed for the purpose.

"Many cases have now been recorded in which tubage was practised instead of tracheotomy, and the subject has been more than once before the New York Academy. In the course of the last debate (June, 1887) it was stated that 760 cases of intubation by fifty-four different operators had been reported, of which 211 had recovered, or 27·07 per cent. Some who had operated frequently were present, and gave most encouraging details, although the accidents which may occur were also freely stated. Great care and watchfulness are necessary, but the operation offers certain obvious advantages, such as the readiness with which it is consented to, and the consequent avoidance of delay in resorting to it. The results seem to be as good as those of tracheotomy, and in young children better. Most of the cases have been in croup and diphtheria, but tubage would seem also applicable in other cases of stenosis both acute and chronic. Even when it fails tracheotomy can still be performed. Bouchut's tube was somewhat like a tailor's thimble, and was to be passed into the larynx with a hollow sound, and left resting on the vocal cords. A thread was attached to secure its withdrawal, and prevent it from being swallowed.

"Dr. O'Dwyer's tubes, which have been gradually perfected, are intended to extend from the false cords to within three-quarters of an inch of the bifurcation. The sides of the tubes are compressed laterally, and bulge in the middle. The angle of the head fits between the arytænoid cartilages, and the anterior part is levelled off to allow the epiglottis to close. The tube is maintained in place by its shape, length, and weight.

"The child, wrapped in a blanket from the chin downwards, should be held upright on the nurse's lap. It should be kept in position by the elbows being held at the side, and another person should steady the head. The gag is now inserted in the left angle of the mouth. The operator at once elevates the epiglottis with his left index finger, directs the tube into the larynx, detaches the introducing instrument, and having made sure that the tube is properly placed withdraws the thread which is only intended to secure the tube if it should be passed

into the œsophagus. The finger should be kept in contact with the tube until the thread is safely removed. To withdraw the tube the patient is held in the same manner, and the extractor guided by the left index finger into the tube. Firm pressure is then made on the lever above the handle, and the instrument carefully removed. Extraction is found to be more difficult than insertion, and for both attention should be paid to the position of the patient, and the instrument carried along the median line. The sizes of the tubes are graduated according to the age of the patient.

"Intubation is a serious procedure, and entails the most diligent after attention. It is only to be resorted to when tracheotomy would be justifiable. It is, in fact, as an alternative to tracheotomy that tubage is to be regarded. Among the accidents that have occurred and the difficulties to be met may be mentioned, (*a*) Injury to the tissues, to prevent which the obturator is used; (*b*) The tube being passed into the œsophagus, and so giving no relief; (*c*) False membrane being pushed down in front of the tube, and necessitating tracheotomy. Even after it is placed the tube may become occluded by the false membrane, or may be coughed up and perhaps then be swallowed. On the other hand it has passed into the trachea, but this was a tube of an earlier pattern; it may become fixed by the swelling of the mucous membrane. The possibility of food passing into the bronchi, of ulceration and granulation, and other untoward events being produced, will not escape the reader. But the most important difficulty of all, and which will tax the physician's ingenuity, is that of feeding the patient. It is this difficulty which has caused Dr. O'Dwyer to modify his tubes in many points, and which is acknowledged by every operator. Occasionally a child swallows well after the operation, but with most others there is great difficulty, and some will refuse absolutely to attempt it. My object in dwelling on these difficulties is not to discourage the operation, which deserves more attention than it has received in England, but to prevent disappointment and to insure assiduous care of the patient after its performance."

LENTIGO. *N. Whitelaw Bourns, M.D.*

Treatment same as in chloasma, but the affection being a more trivial one the milder remedies are to be tried first. Liveing gives the following lotion:

℞ Tr. Benzoin ℥ij | Ammon Muriat. ʒj to ʒiij
Aq. Flor. Aurant. ʒvij

To which three grains of the perchloride of Mercury may be added.

LEPROSY. *N. Whitelaw Bourns, M.D.*

Arning demonstrated the presence of bacilli in the nerves, and in the connective tissue sheaths between the nerves, in anæsthetic leprosy. He considers that infection always takes place from the skin. ("Viertelj für Derm und Syph., 1887, Heft."1, p. 207.)

TREATMENT.—The progress of the disease has been arrested by the prolonged use of **Chaulmoogra Oil.** 10 minims in emulsion with milk given internally; and locally a liniment of 1 to 15 of olive oil.

The Gurgon oil treatment as suggested by Dr. Dougal, has been found the most successful. Half-an-ounce of a mixture of equal parts of **Gurgon Oil** and **Lime-water,** to be taken internally, and a liniment of 1 part of Gurgon oil with 3 parts of lime water to be rubbed in every morning for two hours after a bath, and repeated at 3 p.m.

LEUCODERMA (Vitiligo). *N. Whitelaw Bourns, M.D.*

As shown by Lizzoni from experiments upon the suprarenal capsules of rabbits, is a neurotic affection and related to the discolouration in Addison's disease. Treatment is the reverse of encouraging.

LICHEN. *N. Whitelaw Bourns, M.D.*

Several varieties of this affection have been described as *Lichen Agrius, L. Pilaris, L. Circumscriptus, L. Planus, L. Ruber, L. Scrofulosus, L. Urticatus, L. Simplex.* But only lichen planus, ruber and urticatus, require our special attention. In all cases of lichen, since the days of Hebra, **Arsenic** has been looked upon as the most effective remedy.

In lichen planus with troublesome itching warm **Alkaline Baths** are called for, followed by a lotion of

℞ Liq. Carbonis detergens ℥ss | Glycerini ℥ss
Liq. Plumb. Subacetatis dil Oj

or a lotion of **Nitrate of Silver** gr. iij to the ℥j as suggested by Liveing. ("Handbook of Skin diseases.")

Lichen Ruber.—Lassar demonstrated to the Physiological Society of Berlin, sections of skin from a case of lichen ruber, in which exceedingly minute rod-shaped organisms were seen in the lymphatic spaces and channels. Unna of Hamburg, having found the internal treatment with Arsenic very tedious, sometimes extending over months, tried the following ointment with the very best results, the disease rapidly disappearing in a few days.

℞ Ung. Zinci Benz. ℥xviij | Acid Carbolici ℥vj
Corrosive Sublimate gr. viij to ℈j
To be carefully rubbed in, twice daily.

Lichen Urticatus is a most troublesome form of the disease, generally seen in children who are improperly fed, with unhealthy surroundings, though it may occur in the upper walks of life. The affection is a chronic one, often lasting for some years, with occasional intervals. The itching is always most troublesome at night, and owing to the scratching the papules are usually torn and covered with blood crusts.

Small doses of **Arsenic** are called for, the bowels kept freely open, with a light but nutritious diet. Duhring uses the following lotion :

℞ Acidi carbolici	ʒss	Alcoholis	℥viij
Glycerinæ	℥ij	Aq. Amygdal. Amar	℥viij

M. Sig. Use as a lotion two or three times daily.

LITHOTOMY.

W. H. Elam, F.R.C.S.

A good many papers have appeared on the subject of lithotomy, and the best operation to select for stone in the bladder. Only a very short review of the most important ones exemplifying the most recent teachings, can be given here.

Choice of Operation.—(1,) In children, litholapaxy should be more adopted than has hitherto been the custom. (2,) In male children, when the stone is at all large, the suprapubic will probably prove to be easier and safer than the perineal operation. (3,) In female children, litholapaxy should be the rule for small stones, and the high operation for all large ones. (4,) In adult females, litholapaxy, or dilatation and extraction, should be adopted for stones of moderate size ; vaginal lithotomy for those somewhat larger ; and the high operation for those decidedly of large size. (5,) In adult males, litholapaxy should be the rule for stones up to an ounce or an ounce and a half ; above that size, lateral, or possibly suprapubic lithotomy—certainly the latter for all stones over three ounces. (6,) In the aged, the same rules apply when the urinary organs are healthy ; but when the prostate is large and the bladder atonic, suprapubic lithotomy should be adopted, until its success or failure is demonstrated. (Mr. W. Cadge, "Brit. Med. Journal," July 3, p. 6.)

Sir Wm. MacCormac ("Brit. Med. Journ." 1887, vol. i. p. 551) contributes another valuable paper upon the suprapubic operation. The article commences with an account of the history of the operation. The modern method is described as follows : Strict antiseptic precautions are adopted throughout. The rectum is distended by an india-rubber bag, of elongated sausage-form ; 10 to 12 ounces are injected. The bladder is emptied, washed out, and then moderately distended with **Boric Solution** (6, 8, or 10 ounces). The bladder will then be readily felt above the pubes. The incision is median, is

close to the pubes, and from two to four inches in length. The tissues are divided layer by layer, until the bladder is distinctly exposed. After the viscus has been secured by two loops of thread passed through the muscular coat at the upper exposed part, the cavity is opened. The stone is then removed. In young persons with healthy urine, the wound in the bladder may be closed by sutures, in other cases the wound may be left open with or without drainage.

The author gives an account of a series of experiments performed, to ascertain the effect of distention of the bladder and rectum, upon the position of the peritoneal reflection. When the bladder alone is distended, the peritoneal reflection is somewhat but not sufficiently raised, the bladder being chiefly distended backward. Distention of the rectum alone appears to produce no palpable effect on the vesical fold; and to obtain the maximum result, distention of both bladder and rectum seems necessary. The dilatation of the rectal bag pushes the moderately distended bladder forward and upward against the parietes.

The mortality after the suprapubic method is from 22 to 30 per cent. The commoner causes of death are (in order) peritonitis, pericystitis, pyelonephritis, collapse.

In twenty-six cases of suture of the bladder wound, primary union was obtained in ten cases only.

After lithotomy, recurrence is very rare; only 40 out of 1,030 individuals were operated on a second time. In Sir Henry Thompson's cases of lithotrity there was recurrence in about 13 per cent., which constitutes a serious drawback to the operation. Up to an ounce and a half in weight, lithotrity is superior to lithotomy, so far as mortality is concerned; above that weight, say from an ounce and a half to three ounces, lithotomy is probably more safe and successful.

Surgeon-Major Keegan has lately demonstrated ("Lancet," 1886) that lithotrity may be successfully employed in quite young children, and also for very much larger stones than have hitherto been dealt with in this manner. He has successfully removed a mulberry calculus of four ounces in weight, and a phosphatic one of eight ounces, by lithotrity in a single sitting.

He found the urethra in boys larger than has hitherto been supposed, and that a No. 7 lithotrite will pass into a bladder of a boy aged two years. A No. 6 catheter will even enter the bladder of a child one year old, through which a fair sized stone may be evacuated. He does not think the lateral operation is frequently followed by emasculation, and while he admits the suprapubic to be the easier method in young children, he

does not consider it so successful. Freyer, for instance, has cut 143 boys for stone in India by lateral lithotomy without a death, and Dr. Keegan does not think that in India the high operation will obtain much vogue as a substitute either for lateral lithotomy or lithotrity.

The usual indications for the performance of the high operation are the presence of a large stone in a contracted bladder, a calculus projecting into the urethra, encapsulated and very hard calculi, cases of numerous stones, foreign bodies which cannot be broken up or otherwise extracted, ricketty deformity of the pelvis, and ankylosis of the hip-joint. Some would include amongst indications, considerable hypertrophy of the prostate, stricture of the urethra, irritable bladder, and cases of "bleeders." The high operation certainly affords the straightest, shortest, and broadest way to the bladder; each step is under the eye of the surgeon, and the operation throughout is capable of being done antiseptically. The stone can be easily removed, the whole interior of the bladder may be explored by the finger, or its surface examined by means of a suitable light. In cases of encysted calculus this method of operation affords obvious advantages. There is never subsequent incontinence of urine, and fistula is very rare, nor can sexual impotence happen. A hernial protrusion along the line of cicatrix may possibly take place, especially if any transverse division of tissue have been made. By a combined distension of the bladder and rectum the former is pushed forward and upward, the vesical wall closely approaches the abdominal, and an ample area of the bladder, where it is uncovered by peritoneum, is exposed for the purposes of safe incision.

In performing the operation, the linea alba having been exposed, is divided with a free hand, the recti muscles separated, avoiding, if possible, opening their sheath. The pre-vesical fascia is now reached, and a blunt hook is introduced into the upper angle of the wound, which is drawn strongly upwards. If the peritoneal reflection be within the area of the wound, it will then become plainly visible as a transverse line, and can be pushed upwards out of harm's way. Generally it is not seen. The pre-vesical fat must be now divided. It is often in great quantity, and may have to be carefully cut through before the position of the peritoneal reflection is discovered. In accordance with Rousset's advice, Schmitz insists that all rough manipulation of the cellular tissue between the bladder and symphysis must be absolutely avoided, as in this way the door is opened to urinary infiltration. The division of the pre-vesical cellular tissue may be best effected by cutting it carefully between two pairs of rat-toothed forceps; all bleeding points

are at the same time carefully seized and secured before the bladder is opened. The bleeding is sometimes embarrassing. In nine of thirty-eight operations, the primary hæmorrhage was considerable, and in four cases severe secondary bleeding occurred. Hæmorrhage may be prevented to a large extent by not incising the bladder too low down behind the symphysis, or approaching the neck of the bladder, where the vessels are large and numerous. Even when the loss of blood is slight, it is important to prevent it filling the meshes of the pre-vesical cellular tissue. When this occurrence takes place, and the presence of urine is added, it is easy to understand how readily septic changes may take place. Means are taken to prevent sinking of the bladder-wall into the pelvis, not merely to facilitate the extraction of the stone, but also to aid in an examination of the interior of the bladder, in the arrest of bleeding, and in the subsequent suturing of the wound. If allowed to sink downwards, considerable damage may be done to the soft parts in drawing it up again. If not drawn up, the bladder may be pushed before the finger, the opening in it missed, and the bladder-wall separated from the pubes. Schmitz never sutured the bladder. He regards the abdominal position as recommended by Trendelenburg in 1877, as a good one to secure efficient drainage.

Dr. Marc Sée contributes a valuable paper to "Revue de Chirurg.," February and March, 1887. After discussing the causes of death in hypogastric lithotomy, the value of pushing the bladder forward, etc., and the causes of failure of emptying the bladder and keeping it empty by urethral catheter, he concludes that it is useless and dangerous to keep a catheter in the urethra for the first eight days. It is useless to expect to keep the bladder empty by the retained catheter unless the opening into the bladder be completely sutured. An endeavour should be made by carefully making the wound even and regular, and afterwards completely suturing, to procure immediate union of the wound. The various modes of draining the bladder have not the importance which has been assumed or claimed for them. Abdominal and lateral decubitus give excellent results for draining the bladder through the wound, and should be more fully tried.

LIVER (Disorders of). *Alfred G. Bateman, M.B.*

Gall-stones.—Dr. Ord, in his address at the British Medical Association at Brighton, called the attention of the profession to the rarer symptoms produced by gall-stones. Although in a majority of cases the usual well-known symptoms of jaundice, biliary colic, bile-stained urine and light-coloured stool are present, in many *post mortem* examinations, gall-stones, large and small, solitary or in hundreds, are

found, where, during the life of the patient, not one of these signs were present; and indeed, no evidence structurally of serious local mischief is found in some! He reports a case where it was evident that although there were no precedent signs of gall-stone whatever, adhesion had taken place between the gall-bladder and an adjoining coil of intestine, and that a painless ulceration had afforded an easy retreat to the concretion, until it reached the anus, where it was with the greatest difficulty expelled. The same difficulty may of course occur in the intestines and no other symptom of gall-stone be present but that of intestinal obstruction. At an examination on one case, a piece of jejunum was found highly inflamed, and black and rough on surface, and a very large gall-stone was found just below the site of the inflammation. Dr. Ord considers that in all cases of intestinal obstruction, we are not justified in excluding impacted gall-stones, even where there is an entire absence of any previous history of biliary colic. He reports other cases where gall-stones have given rise to various kinds of pain without any symptoms of jaundice: severe pain in region of gall-bladder, in the epigastrium and elsewhere, becoming relieved by the sudden appearance in the stools of large biliary calculi. All these cases shew clearly that protective adhesions may first take place, and then an adventitious ulcerative perforation is formed leading in some cases to the peritoneum, and in others to the intestines, forming a track by which the calculus escapes.

Gall-stones may also set up intermittent pyrexia, in some cases, presenting the appearance of an ague, but not of ordinary type. The paroxysmal pyrexia is probably due to local irritation of mucous membrane, propagated thence to the central nervous system, and is generally found in persons apt to take on febrility, and mostly in those who have been previously the victims of intermittents.

Glycosuria may also be induced by the presence of a gall-stone, disappearing after its sudden passage. The causation of this is due to the active arterial hyperæmia of the liver, induced by the irritation in the gall-bladder, and the incidental over-distension of the whole duct system of the liver. The irritation brought on in the liver by this combination is not reflected to other organs, but is thrown back upon itself with resulting hyperæmia of the liver and glycosuria.

In other cases the irritation *is* reflected to other viscera resulting in pneumonia; the absence of glycosuria is compensated by the access of pneumonia, which is the result of a secondary remote reflex arterial hyperæmia, determined by local or general conditions which cannot be identified.

Splenic Enlargement and Jaundice.—Five cases have been reported by Maragliand illustrating the simultaneous and proportionate development of icterus and enlargement of the spleen, and in which the latter disappeared as the former diminishes. No other assignable cause was found for the splenic enlargement, and the conclusion was arrived at that it was due to the passive congestion of the liver, due to the pressure on the portal capillaries, caused by the over-filled biliary vessels. These cases read by the light of Dr. Ord's investigations further illustrate the reflex causation of visceral inflammations.

Surgical Operation for Removal of Gall-stones.—A case is reported by Mr. Thomas Jones of a female patient who was presumed to be suffering from a tumour of kidney origin. A swelling, smooth and circumscribed, was found extending from the right costal margin to nearly the crest of the ileum, and bulging in the right lumbar region. Pus was found in the urine intermittently. On an exploratory puncture being made, pus was obtained, and it was decided to drain the abscess cavity from behind. An incision as in right lumbar colotomy was made, the kidney explored, and found healthy. The peritoneum was then incised, and the tumour found to be due to an enormously distended gall-bladder. The posterior wound was then closed, the peritoneum being carefully stitched with fine catgut. A fresh incision was then made through the abdominal walls over the most prominent part of the swelling, the sides of the opening into the parietal peritoneum being stitched to the margins of the skin incision over an area the size of a florin, *the tumour itself being left untouched.* The wound was dressed with iodoform gauze, and not touched for 6 days. An incision was then made into the gall-bladder ; pus escaped, and a large gall-stone the size of a pigeon's egg was removed. The wound was dressed as before, and drainage established by a glass tube. More gall-stones with fragments of others escaped during the following days, and finally the patient made an excellent recovery The case illustrates the advantages of performing the operation in two stages.

Alimentation during attacks of Jaundice.—F. Müller has made a series of investigations upon the disturbances occurring in the intestinal canal in icterus. His method consisted in administering nourishment of determined qualities and quantities, and then by analysis of the fæces, ascertaining how much of each class of nutritive substances had been absorbed. The conclusions he came to were as follows :—

In cases of obstruction to the entrance of bile into the intestine, the *absorption* of the *starches* does not suffer at all ; that of *albuminoids* is at most only *slightly* affected ; that of the fats is *much interfered*

with. Whereas in health only from 6 to 10 per cent. of fat appears in the stools, in cases of total failure of bile from 55 to 78 per cent. is found.

When the pancreatic secretion has access to the intestines in icteric people as well as in healthy persons, the fat in the fæces appears to be almost entirely decomposed. Needle-shaped fat crystals in the fæces are an indication that the absorption of fat has been interfered with, and these are always found in icterus.

In simple icterus there is no pathological alteration in the albuminous constituents; and the condition of the neutral sulphur and of the compounds of the sulphur acids does not differ from that in health.

Biliary Lithiasis.—Dujardin-Beaumetz recommends the suppression of all fatty substances, and the carbo-hydrates which may furnish cholesterine in biliary lithiasis. Peas should be forbidden, as they contain a substance similar to cholesterine. The exclusive use of meat should be avoided, and eggs should be rarely eaten. A mixed diet composed of meat and green vegetables is the best. All green vegetables may be eaten, and also potatoes. Not too sweet fruit may be taken: pastry forbidden. Frequent meals to be ordered, so as to give constant employment to the gall-bladder. Wine with mineral water forms a good drink. The bowels should be kept free, and plenty of exercise taken.

Antiseptic Action of Bile.—Clinical facts appear to support the hypothesis that the bile acts as an antiseptic agent on the figured ferments of the intestines. In icteric patients with absence of biliary secretion in the intestines, intestinal putrescence increases. The action of bile on microbes in the upper part of the small intestines, has been investigated by M M. Charrin and Roger. Fresh bile, intact, added to sterilized broth, does not prevent the microbes from developing either in the proportion of 66 cubic centimetres of bile per litre of the sterilized broth, or in larger proportion of bile. The artificial cultivations become turbid, emit a fetid odour, and if shaken, gases collect on surface. Each separate constituent of the bile exercises a different action. Biliary salts are more energetic than bilirubin; this is especially true of the taurocholate. The antiseptic qualities of bilirubin are very slight; lecithine and cholesterine are apparently inert; and intact bile is less inert than its constituent elements taken separately.

Influence of the Systemic Temperature on Bile Secretion.—A series of elaborate experiments have been made by Professor Alexander Dochmann on this subject. The experiments were made on curarised

cats with empty stomach and artificial hepatic fistula, the cystic duct being tied. The temperature was regulated by the animal being placed in a tin chamber with double walls, between which water of varying degrees could circulate freely. The results are summarized thus :— (1,) A change in the temperature of the body produces a marked influence on the process of bile secretion, the latter being accelerated by warming the animal, and retarded by cooling. (2,) The acceleration has its maximum, beyond which, on a further increase of the temperature, there commences a retardation. (3,) The secretion of bile, when retarded by warming or cooling, may be again quickened by a converse thermic effect. (4,) The rise of the systemic temperature from 37° to 40° C. produces an acceleration of the bile secretion. Above and below these levels lead to a retardation and ultimate stoppage of the secretion. (5,) The highest systemic temperature at which the secretion of bile is still perceptible, is 44° C. in the rectum. (6,) An explanation for the changes in the bile secretion under the influence of temperature may be sought exclusively in some alterations of action of the hepatic cells themselves, and not in any changes of the vaso-motor or secretory nerves. (7,) Temperature changes produce an influence only in the amount, but not in any quality, of work of the hepatic cells. A series of careful analyses of the bile collected under various conditions proved this unmistakably.

Catarrhal Jaundice.—Repeated injections of large quantities of cold water into the bowel are recommended by Dr. Gluzinski. These increase the peristaltic action of the intestines, and remove any mechanical obstacle to the flow of bile. The bile is rendered also more liquid and more abundant. At first water at 59° F. is injected until the patient complains of feeling of distension in the abdomen. It should be retained as long as possible. Daily the injection should be repeated, increasing the temperature about 4° F. When the temperature of 72° F. has been reached, no higher degree should be used. As a rule about 4 or 5 injections are sufficient to produce the desired effect. Careful attention to diet will prevent a recurrence of the affection. The first injection of cold water may cause diarrhœa, and if this be the case, water of a higher temperature should be used a second time. Löwenthal has published forty-one cases treated in this way, in which the result was uniformly successful.

Bilious Vomiting.—Dr. Atkinson recommends, as the most successful method of dealing with this symptom, a mixture as follows :—

℞ Liq. Potassæ ♏xv | Tinct. Opii ♏iv

M. Fiat Hst. To be given every four hours.

In simple uncomplicated cases, he states that it acts like a charm, the vomiting rarely repeating itself after the second or third doses. The liq. potassæ acts as a direct sedative to the stomach, and is also a stimulant to the secretion of bile.

Tropical Abscess of the Liver.—In a clinical lecture, Sir Dyce Duckworth has done good work in calling the attention of the profession to this important subject. Although but few medical men, comparatively speaking, have to treat these cases, occurring as they do mostly, in our tropical possessions, yet, as locomotion is so easy now, cases are occasionally met with at home. All Europeans in the tropics are not equally liable to hepatitis and abscess; those are affected who have a special predisposition to "go wrong" in a morbid direction. Although the worst cases die in India or on their way home, others have had favourable terminations by rupture of the abscess into some part of the gastro-enteric tract; and again, some only develop the special symptoms of their malady after arrival in this country. Hepatic abscess, as seen here, is of the pyæmic or multiple variety. Purulent absorption takes place from breaches of surface in any part of the alimentary canal drained by branches of the portal vein. The abscess in the liver may be induced by gastric ulcer and ulceration of the gall-bladder and bile ducts, and operations on the rectum. As mere ulceration is not sufficient by itself to account for purulent infections, Sir Dyce Duckworth considers that there is a *special infectivity attaching to the detritus of bowel ulcerations.*

The solitary or tropical abscess depends on peculiarities of life and climate. There is something specific in the effects of prolonged heat upon the functions of the liver differing in extent upon the individual. As women are more rarely the subjects of hepatitis leading to abscess, and in children the disease is practically unknown; and as hepatic abscess is rare under 20 years, and more frequent over 25 years of age, Sir Dyce Duckworth considers that a combination of forces, including alcoholic intemperance, greater exposure to solar influence, and more intense grades of malaria, are the true factors in this disease.

The diagnosis of hepatic abscess may be very difficult owing to the latency and insidious character of the symptoms. Large collections of matter may occur in the liver without any symptoms directly referable to that organ. According to the special seat of the abscess, so do the symptoms vary. The most acute pain is found when the capsule is involved, the parenchyma being but slightly sensible; the pain generally referred to the liver being due to the pressure on the capsule.

Tropical abscess generally points superficially, and presents in a low intercostal space, or under the cartilages in the hypochondria.

THE TREATMENT consists in early free antiseptic evacuation of the pus by incision. The former practice of first establishing adhesions between the liver capsule and the parietal peritoneum by issues from caustic potass and peas, is no longer held necessary by the best authorities. If decided improvement be not found after evacuation of the abscess, imperfect drainage or the existence of another collection of matter must be suspected. Washing out the cavity even antiseptically is considered by the lecturer as not only unnecessary, if free drainage be secured, but as a possible source of mischief. The prognosis must always be guarded: immunity from second attack, provided the same pre-existing causes occur, is rare. Careful dieting helps considerably. The drugs which prove most useful are **Quinine, Cinchona,** and **Mineral Acids.** If the tongue be coated, with accompanying anorexia, alkalies, such as **Carbonate of Soda,** with **Bark** in effervescence with **Citric Acid,** do more good than quinine and acid. Later on, **Chloride of Ammonium,** with some bitter, is very useful.

With regard to residence, prolonged stay at some mild or sheltered "sea-side" is most useful. Sea-bathing and cold bath must be forbidden: only warm sea water baths or tepid sponging can be allowed.

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LIVER (Surgery of). *A. W. Mayo Robson, F.R.C.S.*

Operations on the liver may have to be undertaken for injury, for abscess, and for hydatids.

WOUND *or rupture* of the liver is usually fatal from hæmorrhage or from peritonitis, although Sir W. MacCormack (Abdominal Section, for the treatment of Intra-peritoneal Injury), mentions cases of recovery from both stab and bullet wounds. Burckardt, ("Centralblatt für Klin. Chir.," Jan., 1887) relates a case of stab-wound of the liver, 3 cm. long by 6 cm. deep, treated successfully by laparotomy and plugging the wound in the liver with **Iodoform** gauze.

ABSCESS of the liver has been mistaken for empyema, for pleurisy, for pneumonia, and for abscess of the kidney, as well as for carcinoma. The diagnosis is aided by the previous history of malaria, or of dysen-

tery, or of recent operation on the rectum. The presence of swelling; of pain and tenderness in the hepatic region, with or without fluctuation; the muddy complexion; the anxious expression; and the fever, accompanied or preceded by rigors, point to hepatic abscess; and this can be confirmed by the discovery of pus through the exploring syringe.

Treatment.—(1.) *Aspiration* is rather tentative then curative; though, as in a case reported by Dr. Easmon ("Lancet," Aug. 13, 1887), it may occasionally bring about a cure.

(2.) *Puncture by trochar* is a favourable and successful method with some operators, the canula being left in for several days and then replaced by a drainage tube.

(3.) *Gradual opening* by caustic or by the thermo-cautery applied over the tumour, is a slow and painful method, not usually adopted by English surgeons.

(4.) Direct incision is only employed when the abscess is pointing.

(5.) *Hepatotomy in two stages* may be employed when the case is not urgent. In the first stage, the peritoneum is packed with antiseptic gauze; in the second, the abscess sac is incised through the adherent peritoneal layers. Mr. Barwell ("Lancet," Jan. 29, 1887) has modified the first stage, and instead of packing the wound, he recommends previous suture of the liver surface to the parietes.

(6.) *Hepatotomy* is the treatment now generally adopted in all urgent cases, and is the usual method followed out by the most experienced operators.

The operation consists in laparotomy, the incision being made over the most prominent part of the tumour; aspiration of the tumour, to avoid extravasation into the peritoneum; opening the abscess cavity either by scalpel or thermo-cautery; suturing the edges to the skin and inserting a drainage tube.

Numerous successful cases have been reported by Mr. Lawson Tait, Mr. Thornton, Mr. Bryant and other surgeons.

Dr. Zancarol ("Brit. Med. Journ.," June 11, 1887) describes a method of completely cleansing the abscess cavity by irrigation, which he has employed in fifty cases, apparently with great success.

Mr. Godlee ("Brit. Med. Journ.," Oct. 22, 1887) contributes a paper on a mode of incising abscess of the liver through the pleura. He relates a case in which he successfully stitched the two pleural surfaces together before opening the suppurating cavity. Dr. Kartulis secures efficient drainage by resecting ribs when needful. For further information on the subject, see Debate at the Brit. Med. Association Meeting at Brighton, 1886; also "Annals of Surgery," Oct. 1886, and March, 1887.

HYDATID OF LIVER is usually found as a slow-growing, painless, fluctuating enlargement of the liver, existing without fever or cachexia; the diagnosis being confirmed by an exploratory puncture withdrawing non-albuminous fluid, the specific gravity of which is below 1·015, and which contains a large amount of chloride of sodium, and frequently hooklets. Early treatment is advisable on account of the fear of suppuration or rupture.

Treatment.—By electrolysis; by simple puncture; by injection of fluid into the cyst; by tapping with the aspirator or trochar; or by hepatotomy.

Electrolysis and simple puncture have not been more successful than *aspiration* or puncture with a small trochar. Withdrawing a little of the fluid from the cysts by the latter methods often kills the parasite and causes it to shrivel up; but it may set up suppuration; and where daughter cysts exist, there will be a tendency to recurrence. The operation has on several occasions been followed by serious symptoms.

Dr. Arthur Sennett ("Lancet," June 18, 1887) says that out of one hundred cases which he has operated on, by tapping and completely emptying the cyst, there have been ten deaths; and that he believes this to be an average result of cases thus treated in Australia. Not being satisfied with his results he has adopted the following treatment: By means of a large hypodermic syringe he withdraws about two drachms of fluid from the cyst and then injects an equal quantity of a solution (1 in 5,000) of **Perchloride of Mercury.** After a year's trial of the method, he states: "the result of each case has been satisfactory; no suppuration has resulted, and the cyst has gradually contracted." Bardeleben, at the Congress of German surgeons, spoke of having treated forty cases with uniform success by means of caustic (Vienna paste), which perforated the abdominal wall in from six to nine days, causing adhesion as it advanced.

Hepatotomy may be performed in one of two ways:

(*a*) *In two stages*, as advocated ("Brit. Med. Journ.," Jan. 29, 1887), by Mr. Barwell, who incises the parietes, stitches the cyst wall to the margin of the incision, and then opens the cyst after a few days; or, as practised by Graves, who, after exposing, but not opening, the peritoneum, packs the wound with antiseptic gauze, and then, after a few days, incises the cyst.

(*b.*) *Hepatotomy at one operation*, as practised so successfully by Mr. Lawson Tait, is with due precaution, an operation as satisfactory as need be desired. The principles are the same as in hepatotomy for abscess; but the daughter cysts require to be removed by some instru-

ment. The writer, in a recent case of hepatotomy, successfully emptied the cyst of a large wash-hand basinful of daughter cysts by means of a lithotomy scoop. Mr. Thornton, in one case, after emptying the cyst and sponging out the cavity with tincture of iodine, stitched the margins together and closed the wound, relying successfully on strict antisepticism.

Hepatic phlebotomy has been practised by Dr. Harley in cases of hepatitis, and in congestion of the liver where medicines have failed to relieve. In the "Brit. Med. Journ.," Nov. 13, 1886, he gives an account of several cases in which great benefit accrued from his treatment; and in the "Brit. Med. Journ.," Jan. 15, 1887, he contributes a paper exposing the fallacy of certain criticisms, and giving some rules for treatment.

Dr. Kelly, in a contribution to Hepatic-phlebotomy ("The Medical News," Philadelphia) advises, in ascites from cirrhosis, opening the abdomen by a small incision and directly abstracting blood from the liver.

LUPUS. *N. Whitelaw Bourns, M.D.*

Since the paper written by Prof. Doutrelepont, of Bonn, in 1883, the presence of a bacillus in lupus has become more and more firmly established. And the bacilli are thought by Koch to be the same as the tubercle bacilli, though found in much smaller numbers. This view, from a clinical consideration of the disease, we are unable to adopt. Unna, of Hamburg, also looks upon the affection as a "phthisis of the skin."

Treatment has of late been directed against the destruction of the micro-organism; and a solution of the **Bichloride of Mercury,** from 1 to 4 grains to the ounce, kept constantly applied, or subcutaneous injections of **Corrosive Sublimate,** 1 in 1,000, have been well spoken of.

Unna strongly recommended his "plaster mulls" of **Salicylic Acid** and **Creasote** in the "Lancet," Sept. 25, 1886.

In a couple of cases of old standing, and one an extensive lupus ulceration of the side of the face, we have found the daily application of a paste of equal parts of salicylic acid and creasote followed by the best result, causing very little pain, which was entirely avoided by painting the surface over with a 20 per cent. solution of **Cocaine.**

Dr. Viñeta Bellaserra, looking upon the disease as a local tuberculosis, applied a liquid of a germ cultivation of the bacterium termo. The results have not yet been published.

In *lupus erythematosus,* Besnier prescribes the following pill: **Iodo-**

form and **Medicated Soap**, each 10 centigrammes, twice daily. If well tolerated the iodoform may be increased to a gramme a day. ("Journ. of Cutan. and Genito Urin. Dis.," 1887, vol. v., No. 5).

Drs. Gärtner and Lustgarten used electrolytic cauterisation in seven cases of lupus in Prof. Kaposi's clinic. ("Journ. of Cutan. and Genito Urin. Dis.," vol. v., No. 3).

LYMPHODERMIA PERNICIOSA. *N. Whitelaw Bourns, M.D.*

Kaposi ("Wien. Med. Jahrb." 1885, p. 129), describes under the above name a new disease which he observed in a woman, 39 years of age. On admission to hospital the patient was pale, had swellings of the cervical and inguinal glands, nodular infiltration in the palm of the left hand, as well as flexor surfaces of both forearms; and the clinical symptoms of a universal eczema. In the face, neck, and upper part of the breast the infiltration of the subcutaneous tissue was so great as to produce the appearance of leontiasis. The infiltration became nodular, and gave rise to serpiginous ulcers. The spleen enlarged, the leucæmia increased, and the patient died. The author regards the disease as lymphatic in its nature.

MALARIA (See "Ague.")

MALIGNANT PUSTULE. *N. Whitelaw Bourns, M.D.*

Dr. Rivas reports in the "Union de las Ciencias Medicas Cartagena" three cases of this affection in which good results were obtained by the local application of a paste made of **Quinine** and **Spirits of Turpentine**. The paste has to be frequently renewed, as it dries quickly. In all the cases separation of the scab or slough, and cleansing and healing of the ulcer, took place within four days from the use of the paste.

MANIA (See "Insanity.")

MEASLES. *Alexander Collie, M.D.*

This disease is too frequently regarded as one of no consequence, but the writer thinks it is more often than one thinks a grave malady, and when not severe in itself, its sequelæ are not infrequently serious, even in robust children. The temperature of the room should be maintained at 60° F. or even higher, because of the congested and irritable condition of the mucous membranes. Purgatives should not be employed because of the tendency to diarrhœa, but when necessary the bowels should be moved by an enema of warm water or a dose of castor oil. When the eruption comes out slowly, in particular, when it is dark in colour, and the patient is depressed, the warm bath may be given, and champagne according to all the circumstances. During the attack the condition of the larynx should

be observed in order that tracheotomy may be performed, if the state of the lungs do not contra-indicate this. As the acute stage is passing off, the patient should have a flannel gown, and care should be taken that he be not exposed to cold, and in this climate if the attack have been in winter it may in certain cases be advisable to confine the patient to the house during the whole of the winter, when, of course, the ventilation should be of the most perfect kind. In some cases a generous diet will be necessary, with which the writer prefers port wine to tonics; but the ordinary **Vinum Ferri** coincides with excellent results.

MELASMA (See "Chloasma.")

MENINGITIS. *Robert Jones, M.D.*

For general treatment, see "Dictionary of New Treatment," 1887, p. 301-2.

Dr. Emil Nilsson recommended the treatment of meningitis with **Iodoform** inunction containing 10 per cent. of iodoform. This remedy has been used by Mr. Holt in the strength of 1 to 4 of **Vaseline** with encouraging results.

Fillippoff records the satisfactory use of **Tartrate of Thallin**, gr. $\frac{1}{15}$ every hour, in lowering the temperature of a child with meningitis.

Morphine subcutaneously, with ice-cold applications to head are advocated by Zitéke.

Ergot and **Gelseminum** have also been recommended. **Menthol, Camphor,** and Hoffman's **Anodyne** have been applied externally, but with questionable relief.

MENORRHAGIA AND METRORRHAGIA.

John W. Taylor, F.R.C.S.

The *causes* of these are numerous and varied. An accurate diagnosis is accordingly of the greatest importance; successful treatment in any given case depending largely upon this. *Heart Disease*, *Kidney Disease*, *Liver Disease*, *Incomplete Abortion*, *Subinvolution*, *Chronic Metritis*, *Polypus*, *Myoma*, *Cancer*, *Ovaritis* and *Ovarian Hyperæmia*, *Tubal Distention*, and any small *Pelvic Tumour* which keeps up irritation and hyperæmia may be a direct cause of uterine hæmorrhage.

An instance of profuse metrorrhagia, caused by a small ovarian tumour in a lady 67 years of age, is reported by the writer in the "Birmingham Medical Review" for June, 1887.

Physical Over-work is a fruitful cause among general servants and nurses, especially where there is much running up and down stairs.

Drugs also may sometimes bring on metrorrhagia, mercury being specially liable to produce this symptom.

The treatment, as we have seen, depends upon the cause.

In the menorrhagia of youth, due to ovarian hyperæmia, **Bromide of Potassium** is the almost unfailing remedy. It needs to be given in large doses: one drachm twice or thrice daily being necessary in severe cases.

Digitalis is needed when the menorrhagia is due to heart disease.

Rest, when due to overwork.

Ergot in combination with **Chlorate of Potash** (as in the following formula) is the usual prescription at the Birmingham and Midland Hospital for Women in cases of subinvolution.

℞ Ext. Ergotæ Liq.	ʒss	Acidi Hydrochlor. Dilut.	♏x
Potassæ Chloratis	gr. x	Infusi Gentianæ	ʒj

This is taken regularly (t.d.s.) for three or four months without change or intermission.

In chronic metritis, **Ergot** alone or in combination as above, **Ext. Hydrastis Canadensis Liq.** (xx minims t.d.s.), **Ext. Cannabis Indicæ** (gr. ¼ t.d.s.), **Tinct. Hamamelis** (v to 10 minims), may each occasionally give good results, but if the case be at all severe local treatment will be necessary also. The thick, heavy, and congested state of the uterus may be kept up by retained membrane or a hypertrophied state of the endometrium. This will need removal by **the curette.** Laceration of the cervix is often the cause of the metritis. This will need **Emmett's operation** or the use of the **cautery.** Chronic retroflexion may often appear to be a cause, but is rather an accident or complication.

The **hot vaginal douche** is nearly always a valuable auxiliary to treatment.

Of intrauterine applications (which need to be used with great judgment), **Ext. Belladonnæ, Carbolic Acid, Iodine,** the **Thermo-cautery,** and the **Positive pole** *of the continuous current*, after the method of Apostoli, are of the chief importance.

Polypus may often be felt on careful examination if the cervix is moderately open, and of course needs **removal:** the mucus polypus with **forceps,** the fibroid with the **écraseur.**

Myoma needs **removal of the Appendages or Electrolysis.**

The bleeding from cancer of the cervix or cervical erosion may always be restrained by a **Tannin-wool pad,** covered with **Iodoform,** and furnished with a thread or silk for the purpose of removal after two or three days.

Tubal disease and ovarian tumour will generally need **Abdominal section** to obtain a cure, but the hæmorrhage due to either of these

causes is always benefited by **Rest** and the administration of *the* **Bromides**, either alone or in combination with **Ergot.**

(For additional information see "Uterus" and "Electricity in Gynæcology.")

MICTURITION (Frequent and Painful). (See "Urine, and Nocturnal Enuresis.")

MIDDLE MENINGEAL ARTERY (Hæmorrhage from the).

C. Stonham, F.R.C.S.

A most important paper on this subject will be found in the Guy's Hospital reports, vol. xliii., from the pen of Mr. W. H. A. Jacobson. This classical article, which contains a full account of upwards of 70 cases, is of the utmost importance to all medical practitioners, and I will therefore endeavour to give the most salient points of it, although it is impossible to do it full justice in an abstract.

Anatomical Considerations.—There is much variety in the degree of branching of the artery, and the skull is very thin in the grooves for the branches, an important fact in relation to fractures. The anterior inferior parietal angle is very thin, on account of its remoteness from the centre of ossification of the bone.

Conditions influencing Hæmorrhage—

(*a*) *The Skull.*—Usually it is associated with fracture, this may be very minute or only affect the inner table, or may be on the opposite side to the rupture, or may be entirely absent, therefore the absence of the signs of fracture must not lead us to abstain from trephining. If no fracture is present there is a primary detachment of the dura mater, which is but loosely attached to the bone in the temporal region (Tillaux).

(*b*) *The Brain.*—In 18 out of 70 cases there was contusion and ecchymosis of the brain, this is usually on the under surface of the temporo-sphenoidal and frontal lobes, especially on the opposite side.

(*c*) *The Vessel itself.*—The main trunk is not usually torn, it is more frequently the anterior division, and in some cases small twigs only. From this fact the trephine should not be applied too low down, unless a large clot is indicated by full dilatation of the pupil due to pressure on the third nerve.

(*d*) *Mode of Extravasation.*—In some cases the hæmorrhage is rapid and fatal, in others delayed, and lastly, it may occur in two stages, the first one slight and not causing coma.

(*e*) *Amount and condition of the Clot.*—The average quantity is about two or three ounces, the maximum eight or nine on either side.

If rapidly poured out it is like black currant jelly, but otherwise it is dark, hard, dry, and granular.

Operative Interference.—The cases are divided into three classes, depending upon their greater or less severity, thus—

(1,) The most hopeful cases: slight violence, slight fracture, not extending to the base, compression, with little or no contusion or laceration, rupture of vessel or branches; (2,) Less hopeful cases: Greater violence, fracture into the middle fossa, trivial injury to the brain, rupture of vessel or branches; (3,) Probably hopeless from the first: Very great violence, extensive fracture of vault and base, severe injury of the brain, rupture of vessel or branches.

Symptoms.—The symptoms in their order of importance are—

(1,) Interval of consciousness; (2,) Condition of the limbs; (3,) Condition of the pupils; (4,) Condition of the pulse; (5,) Unconsciousness passing into coma; (6,) Respiration; (7,) The state of the scalp and skull sawn in trephining.

(1,) The interval of consciousness is of the utmost importance, and may vary from a few minutes to several hours: the length of the interval depending upon the amount of laceration of the artery, and the presence or absence of collapse, or any condition influencing the heart's action. The absence of any interval may be due to co-existent concussion or drunkenness.

(2,) Hemiplegia may be very slight or on the same side as the blow. There may only be temporary paralysis or there may be paraplegia. Paralysis may be absent and replaced by twitchings and convulsions. If paraplegia is present it may indicate a hæmorrhage on either side or one very large one.

(3,) If the pupils re-act to light the case is one of compression only, and, with early trephining, the prognosis is good; if, on the other hand, they are widely dilated and insensitive, the compression is extreme and the clot low down. It must be borne in mind that a dilated pupil may simply mean ruptured third nerve.

(4,) The pulse is usually slow, full, and laboured, but may be rapid and incompressible.

(5,) Coma depends for its degree upon the amount and rapidity of the hæmorrhage, if it comes on late it is usually sudden, rapid, and fatal. It must not be confounded with sleep or drunkenness.

(6,) Respiration is usually stertorous and slow, but not always so, it may be rapid and cease suddenly.

(7,) In sawing the bone with the trephine blood may well up. There is usually ecchymosis of the soft structures.

Diagnosis.—Mr. Jacobson gives three conditions, which may especially complicate the diagnosis, and quotes illustrative cases. In cases of doubt, trephining should always be had recourse to in order to give the patient the best possible chance. These cases are—

(1,) Contusion, or laceration of the brain, especially of the temporo-sphenoidal and frontal lobes. This is usually associated with convulsive twitchings, and no lucid interval.

(2,) Laceration of the superior longitudinal or lateral sinuses and extravasation between the dura mater and the bone, or dura mater and arachnoid.

(3,) Arachnoid hæmorrhage. This usually occurs with contusion. From being diffused, hemiplegia and marked inequality of pupils is not so marked.

TREATMENT.—Early trephining is advised, and full details of the operation are given. If hemiplegia be absent, apply the trephine on the side of the dilated pupil.

If paraplegia is present, trephine on the side opposite to the most marked paralysis, and then on the other, unless the clot is found to be very large.

The trephine should not be used too low down, unless the dilatation of the pupil is very marked, for reasons given above.

Usually trephine (unless other circumstances contra-indicate this) about 1½ inches above and behind the external angular frontal process. Examine for fracture, but go on if it is not found, as it may only implicate the inner table or be quite absent. The artery may be found still bleeding, if so what can be done? In rare cases it ceases when the bone is removed (Erichsen's case). In one case Howse applied a freezing mixture to the wound after suturing it; in another he ligatured the external carotid; both means were successful in arresting the hæmorrhage. Beck applied similar treatment with success in two cases. Symonds successfully tied the vessel. Swain used the actual cautery also successfully. Liddell (America) ligatured the common carotid, and the case recovered. If the vessel is in a canal this may be plugged. Or finally, the vessel may be exposed lower down, and ligatured in its continuity.

After trephining, the clot need not be entirely removed as tension will have been relieved.

Mr. Jacobson advises trephining in all cases unless quite hopeless from other causes.

Trephining cannot now be looked upon as a serious operation by itself.

Prognosis.—This will depend upon complications that may be present, the time after the accident at which the patient was trephined, and whether the brain recovers itself.

In addition to the very admirable paper of which the above is an abstract, Dr. C. H. Powers reports a case ("Medical Record," June 24, 1887), of a man aged 28, who came under his care in a comatose state. There was a watery discharge from the ear, the right pupil was slightly dilated, but re-acted to light, and there was complete paralysis and anæsthesia of the left upper limb.

The patient was trephined over the arm area on the right side, a fissured fracture being found in this region after reflecting the scalp. A clot was found, and the opening then enlarged, and the clot removed, leaving a large depression, ¾ inch deep, at the deepest part. The dura mater was uninjured, but several twigs of the meningeal artery required ligature. The brain recovered itself completely on the second day, and the paralysis improved on the first. The patient made a good recovery.

MISCARRIAGE.—(See "Abortion").

MOLLUSCUM CONTAGIOSUM. *N. Whitelaw Bourns, M.D.*

Dr. W. F. Mittendorf of New York, from observations during two epidemics of this affection, has little doubt of its contagiousness, though experiments by inoculation of the secretion by Hebra, Duckworth and others, have invariably proved unsuccessful.

The treatment consists of squeezing out the contents of the little tumours, or as recommended by Mittendorf, abscission with curved scissors, and the application of nitrate of silver to the cut surface. ("Trans. Amer. Oph. Soc." 1886.)

MOLLUSCUM FIBROSUM.—(See "Fibroma").

MORPHŒA. *N. Whitelaw Bourns, M.D.*

Is a rare and chronic skin affection of a neurotic origin, most frequently found about the root of the neck, and thorax in delicate and nervous females. The patches are round or roundish, of a yellowish or ivory white colour, and in the later stages depressed below the surrounding surface. The margin is well defined and bordered by a congestive halo. The disease can only be confounded with Scleroderma.

TREATMENT.—Nervine tonics, with local stimulation, the continuous current, or the application of Rasmussen's ointment, **Black Oxide of Copper**, two grains to the ounce.

MYOPIA.—(See "Optic Nerve").

NECROSIS.—(See "Bone," Diseases of).

NEPHRITIS (Acute).—(See "Bright's Disease").

NEURALGIA. *Robert Jones, M.D.*

Dr. Stone in his Lumleian lectures predicts relief to neuralgic pains by the action of **Electricity**, and Dr. Steavenson has recorded a number of successful cases in his practice, by judicious use of galvanism; the number of applications vary, generally not more than a dozen repetitions have quite relieved the pain.

Fayrer reports a case of sciatica cured by puncturing the nerve sheath, about two drachms of clear fluid escaping with instant relief and permanent cure. Nerve stretching is of course well known. The Salicylates have been prescribed by Dercum for the relief of long standing and obstinate *tic*, the oil of **Gaultheria** ♏ xv being strongly recommended. For temporal and occipital neuralgia and headache, Legal has called attention to the association of temporal headache with Eustachian trouble and ear affections, inflation curing several cases. For occipital headache the application of **Iodised Glycerine** to the pharynx has been highly spoken of.

Grognot recommends **Napelline** in granules of 2½ milligrammes each for obstinate neuralgia; he also states that **Amorphous Aconitine** will relieve when the crystalline is inefficient. Davis of Boston vaunts a prescription as follows:

Tinct. Cinchonæ Co.	℥ii	Morphiæ Sulph.	gr. ij
Tinct. Nucis. Vom.	℥ ss	℥j. om. 3-5 horis	

and he asserts that relief follows the administration of one or two doses, being due less to the sedative action of morphia than the combination with cinchona and nux vomica.

Cannabis Indica has given relief when many others fail.

As a remedy for the painful neuralgia of hemicrania, **Antipyrin** in doses of gr. xv gave marked relief. It is strongly recommended by Dr. Ungar.

Lesas has recommended stretching the facial nerve in clonic spasm ("convulsive tic.") Southam performed it with benefit, but facial palsy being likely to supervene, and the operation giving relief in about one third of the cases, it may be regarded as of doubtful expediency.

Osmic Acid.—Neuher first suggested osmic acid as an anti-neuralgic remedy, and published the results of three cases, two of sciatic neuralgia, and one of the facial. From ten to twenty-five injections were required to effect a cure. Eulenburg obtained three radical cures and four ameliorations out of twelve cases. Many others have used it with very much the same results, *i.e.* with benefit in some cases, and without benefit in others. In his own practice, Dr. Stékoulis tried it in ten cases (six men and four women) of idio-

pathic sciatica, the duration of which varied from fifteen days to two years. The result of the treatment was eight successes, one much improved, and one in which the remedy proved inert, after four injections, beyond which the patient refused to go. Its effect is explained by the well-known effect of osmic acid on certain constituents of nerve-tissue. No abscesses nor other inconvenience followed its use beyond the pain at the time of the injection. An aqueous solution, containing 1 per cent. of acid, is generally used, of which about *sixteen minims* are injected. It stains the skin and clothes black. The injection should be made *loco dolenti*, *at first daily*, and then less frequently.

Finally Dr. Bendelak Hewetson refers many cases of neuralgia to errors in refraction.

NEW-BORN INFANTS (Treatment of). *W. R. Dakin, M.D., B.S.*

Ophthalmia.—If douching with an antiseptic is properly carried out during labour (see "Puerperal Dis.," *Douching*) this affection will seldom arise. Kaltenback employed vaginal irrigation of 1-1000, which is needlessly strong, and washed the child's eyes with plain distilled water. He had only one slight catarrhal case out of 200. In this way there is no irritation of the conjunctiva as in Créde's method of dropping a weak solution of silver nitrate into the eyes.

A few cases have been published of arthritis in connection with this disease.

Artificial foods.—Ashby, in some experiments on the solubility of the curd formed by cow's milk on treatment with gastric juice found this:—He took three test-tubes: into the first he put 1 cc. of cow's milk and 1 cc. of water; into the second 1 cc. of milk and 1 cc. of lime-water, into the third 1 cc. of milk and 1 cc. of Mellin's food (1 to 5). To each 1 cc. of artificial gastric juice was added, and sufficient free acid to (2) and (3) to neutralize their alkalinity. The precipitated curd was alike in all cases. They were maintained at 105° Fah. for 12 hours, and the amount of curd, reduced to a ball the size of a pea was the same in each. The fluids were at rest, so the experiment does not fulfil quite the conditions. He found that milk which had been pancreatised when treated in the same way gave a flocculent precipitate with gastric juice which was dissolved in two hours.

The food most resembling human milk is the following, prepared on Biedert's principle. Mix ¼ pint of cream with ¾ pint of warm water, and add ½ oz. of milk-sugar. To this 2 oz. to 10 oz. of milk may be added according to the age and digestive powers. Barley-

water may be used instead of plain water, and dextrine and maltose may be added as in Mellin's food if they agree, as they certainly make children thrive.

Peptonised milk is made as follows :—Pour 4 oz. of boiling water on 4 oz. of milk, adding a quarter of a Benger's peptonising powder and two teaspoonfuls of cream—allow to stand for ten to twenty minutes, and add a teaspoonful of sugar or milk-sugar. If children pass curdy motions with this food, the curd is soft and gives no trouble. This food will agree in nearly all cases, even when the child's digestion has become almost ruined.

It must be remembered that human milk differs considerably at different periods of lactation and at different stages of the process of emptying the breasts. In the earlier weeks it is very rich in albumen and salts, but later on they become scantier and more sugar is present. When the child has been sucking for some time the milk becomes, like "strippings" in the cow, richer in fats and poorer in curds. Both these facts may be taken advantage of when children seem unable to digest their mother's milk—and the former should be remembered when an artificial diet is to be used.

In diluting cow's milk, the casein and salts may be brought to the human proportions, but the fats will be wanting. "Strippings" (the milk got by a second milking a short time after the proper one) are the most free from this objection, and should always be used. In addition, the curd of cow's milk differs considerably, however precipitated, as above shown, from the curd of human milk, in its tenacity and greater insolubility, and it is precipitated by dilute acids, while human curd is not.

Lime-water is most useful in neutralising acidity in the child's stomach, but there its power ends.

Out of 1,000 deaths from infantile diarrhœa, Hope ("Liverpool Med.-Chir. Journal," Jan., 1887) found that 30 occurred in children fed on the breast alone, against 393 who had no breast-milk, and 287 who had artificial food as well as the breast. He deduces the following :—Assuming that 50 per cent. under three months of age are fed on the breast alone, for every infant so fed who dies of diarrhœa, 15 die out of the remaining 50 per cent. who receive other food in addition to or instead of breast-milk.

Assuming that 15 per cent. of infants under three months are reared exclusively by artificial means, the deaths among them are twenty-two times as numerous as they are among children partly or entirely breast fed.

Hæmophilia in infants.—This gives rise to very troublesome accidents and is more frequent than is supposed. The children may lose this hæmorrhagic tendency as they grow, and never suffer from it on any future occasion. It is probably therefore not what is understood as true hæmophilia. Female children in the author's experience suffer as often as males. Fischl found at Prague 61 cases in a year, and 251 in seven years. ("Archiv. f. Kinderheilk," Heft. 1, 1886). Hæmorrhage is most frequent from the navel, but also takes place from the skin and mucous membranes. The tendency has been put down by various authors to pyæmia, small emboli having been found in the vessels, containing micro-cocci, and to syphilis. Fischl examined the arteries of numerous cases, but found them quite normal. He points out that the cases become less and less numerous as the hygienic conditions of hospitals improve.

Hæmorrhage from the navel is often very difficult to treat, especially under these conditions, and as children bear even slight losses of blood very badly it is important to check this at once, and not waste any time over cold and bandages, &c. If one pad (best made from a small coin wrapped in lint) properly applied is not successful, the navel should at once be under-run from side to side with a long needle, or better a hare-lip pin. This must go as well as can be judged right through the abdominal wall. If the parietes are pinched up and transfixed the intestines run no risk of being wounded. The pin should be aseptic. A silk ligature is then applied over the ends of the needle in a figure of 8, and all the tissues above and below with the umbilical vein and arteries will be compressed. A piece of cork covers the point of the needle. The bleeding is effectually stopped. Dry dressings are applied, and all may be left till the needle is just loosened enough by suppuration in its track to come out without any effort. The author has found this method the only safe and effectual one on several occasions.

Umbilical Hernia.—In case of this abnormality, from statistics given by Olshausen ("Arch. f. Gyn." Bd. xxix. Heft. 3), it is necessary to operate. In 15 cases he saw, no life was preserved when the treatment was merely pressure or ligature. One child with part of the liver in the sac lived five weeks. The accidents which usually happen in the absence of operation are destruction of the amnion (covering of tumour continuous with skin) and tear of the peritoneum and fatal peritonitis. The operation is as follows :—(it is only successful when the hernia is replaceable). An oval incision is made close to the skin-margin around the base of the tumour, and then the skin-edge

and amnion are stripped off the parietal peritoneum (sac). The raw edges of the skin are then brought together, the cut vessels being ligatured. The hernia is thus reduced with an intact peritoneum.

NOSE (Diseases of). *Prosser James, M.D.*

Disease in this part has continued to attract increased attention, and the tendency of specialists is still towards surgical interference. Dr. Thos. R. French brought before the Brooklyn Medical Society the effects of disease of these passages or other portions of the respiratory tract in a paper maintaining that such disorders arise from (1,) catarrhal discharges; (2,) the habit of mouth breathing induced; (3,) reflex irritation. As to the first: he finds the acrid discharges sometimes so copious that a continuous stream extends from the pharynx over the inter-arytænoid tissue into the larynx, the path being often marked by a broad, well defined strip of diseased membrane. But these discharges seldom continue further towards the bronchi. Secondly, in mouth breathers the throat is always the seat of catarrh and dyspepsia with defective nutrition often produced. These are cured by establishing a normal passage. Thirdly, *Glottic Spasm*, *Cough*, and *Bronchial Asthma*, may result from reflex irritation; but these he has only seen where the disease was chiefly in the posterior nares, *Headache*, *Neuralgia*, *redness of the Nose-tip*, and other phenomena, may be recognized as reflex by successful treatment of the nasal disease. He attributes the benefits of caustics to the destruction of the nerve filaments rather than hypertrophied tissue.

Dr. Rice discussed the surgical treatment of nasal catarrh, at the American Laryngological Association, holding that there is a middle ground between mild local applications and severe surgical procedures. He had seen bad results from galvano-cautery, but freely recognized its value. With increased facilities of operating came greater activity in practice, and sometimes too much is done in the attempt to make straight channels of those intended to be curved and tortuous. The use and value of erectile tissue in the nose should not be forgotten, and the tissues are not always hypertrophied wherever they nearly occlude the nostrils. The presence of other symptoms of nasal catarrh is necessary to determine whether the condition is pathological. Not every case presenting pathological conditions requires either medical or surgical treatment. The special complaint made by the patient is to be considered. One who breathes easily through his nostrils does not want so-called hypertrophy removed. Nostrils are often examined in which the mucous membrane on both sides seems in contact with the septum, and yet the

patient breathes easily. A four per cent. solution of **Cocaine** will show if there is real hypertrophy, or enlarged turbinated bone. In that case the cautery may be used ; for permanent enlargement does more than obstruct the air, it irritates by friction the septum with which it comes in contact. But only just enough should be done: it is because the knife and the cautery have been used too freely that conservative laryngologists have deprecated them.

Dr. G. A. Wright called attention last year ("Med. Chron.") to thickening of the septal cartilage as a cause of obstruction. In one case there was a distinct prominence on one side, no depression on the other, no dislocation or deviation. He dissected off the membrane, shaved off the projection about the size of a split pea, replaced the membrane and closed the wound with horse-hair sutures. Dr. McBride published ("Brit. Med. Journ.") a lecture on nasal neuroses, giving a short sketch and references to the literature. Dr. Thudichum related several cases of hypertrophies and tumours, at the West London Med. Chir. Society. Dr. B. W. Richardson has reported ("Asclepiad") a case of epileptiform seizures which ceased after the removal of a nasal polyp. A number of cases of various growths have been reported by different practitioners. Schmiegelow has reported some rare cases of perforation of the septum.

Rethi fuses **Chromic Acid** on a probe at a low heat to remove water of crystallization. If the heat be too rapidly applied, or kept up till a green film forms, the caustic properties are lost.

(See also "Air Passages," "Coryza," "Hay Fever," etc.)

ŒSOPHAGUS (Stricture of). *Prosser James, M.D.*

C. J. Charteris dilates with bougies as long as solids can be taken, then uses a short rubber tube from time to time until fluids cannot be taken. After that Krishaber's method, or gastrostomy. Roosevelt has related a case in which the œsophagus became dilated nearly its whole length to the bulk of a quart. Professor Ogston lays stress on the time the food takes to pass through the gullet, as a guide in diagnosis. In health it takes 2½ to 8 seconds ; in stricture 14 to 18 seconds. The starting of the bolus is indicated by the movement of the pomum Adami. "If the ear be placed behind the left thorax, three inches below the angle of the scapula, the moment of entrance into the stomach can nearly always be told by a distinct amphoric gurgle or amphoric rushing sound. By noting these two points the time involved in the act of swallowing is indicated."

OOPHORECTOMY. *Skene Keith, M.B., F.R.C.S.E.*

This operation varies little from that of ovariotomy in many of its

details : the preparations are the same, the operation itself is somewhat similar, except that it is very rarely necessary to insert more than two fingers into the abdominal cavity. After the operation it is well to move the bowels early in those cases where there has been much tearing in the pelvis. The operation is performed for chronic ovaritis, and to check the growth of uterine fibroids, by bringing on an artificial menopause. The results for the first named disease are often extremely satisfactory, and for the second, when the whole of the ovaries can be removed, nothing better could be expected from an operation, though it seems at present possible that electricity will do away with the necessity for this cutting operation.

OPHTHALMIA. *Wm. Lang, F.R.C.S.*

Gonorrhœal.—Professor Fournier draws attention to the two varieties of ophthalmia due to gonorrhœa. The rarer form is probably due to an affection of the system, as it often appears in conjunction with gonorrhœal rheumatism.

Its treatment consists in the use of mild antiseptic lotions. **Boric Acid**, 10 grains to the ounce, or **Chloride of Zinc**, ¼ grain to the ounce, and the internal administration of **Salicylate of Soda** or **Antipyrin.**

The more common variety is due to the inoculation of the conjunctiva with the gonorrhœal discharge ; at first it is usually confined to one eye, and if due precautions be taken, the second eye can always be protected from contagion.

When first the patient comes under observation, the unaffected eye must be washed out with a **Perchloride of Mercury Solution,** 1 in 5,000, and then closed with a large pad of wool and a bandage until a Buller's shield can be applied. A Buller's shield can be obtained at Weiss', or it can be equally well made in the following way :—Having procured a flat watch glass, or a small piece of glass, a circular hole is cut in the centre of a four-inch square piece of rubber plaister. The glass is now laid over the hole on the adhesive side of the plaister, and is secured in position by a second square of plaister having a hole in it. The second square must leave an uncovered margin, an inch or more wide, along two of the sides of the first piece. These adhesive margins are now applied along the ridge of the nose and above the eyebrow, the glass being opposite the eye. At the bridge of the nose an incision will have to be made in the shield in order to make it fit close to the skin, and this now becomes the weak point, and it should be protected by a layer of gauze and **Collodion.**

The affected eye is now to be irrigated for fifteen or twenty minutes,

every hour or two, with a solution of **Perchloride of Mercury**, 1 in 2,000 to 5,000, or of **Chloride of Zinc**, 1 in 500, or of **Carbolic Acid**, 1 in 50 to 1 in 80. Any of these or other suitable germicide lotions must be placed in an irrigator connected by means of a long piece of tubing, with a hollow perforated speculum, or as suggested by Story of Dublin, with a smaller piece of rubber tubing closed at one end, and then by means of a piece of wire placed inside, bent and kept in the shape of a retractor. Apertures are now cut in its sides, and an improvised irrigation retractor is at once ready.

The irrigation must be continued till all the discharge is washed out, and the length of interval will depend on the rapidity of the re-accumulation of the discharge.

It is well for the surgeon and nurse to wear clear glass goggle protectors, as a splash during the irrigation has before now led to the loss of the attendant's eye.

When the cornea is affected, **Eserine**, 2 grains to the ounce, should be applied every three hours.

Ophthalmia Neonatorum.—The prevention of purulent ophthalmia in the new-born child is now so perfect that Crédé gave as his most recent results, three slight cases in 1,211 births. He finds that irritation of the eyes can be avoided if only a small drop of a two per cent. solution of **Nitrate of Silver** be placed between the lids. To ensure this he uses a glass rod six inches long by one line thick, with a smooth round end. Drop bottles he condemns.

The principle of the method is preventive, therefore, directly after the birth of the child its lids are wiped dry, then washed clean, and 1 drop of the 10 grain solution of **Nitrate of Silver** dropped into the eye. This treatment can be carried out by midwives, or by the laity.

OPTIC NERVE & VISION (Affections of). *Wm. Lang, F.R.C.S.*

Optic Neuritis.—In a case of optic neuritis with rapidly failing vision, which was not arrested by **Iodides** and **Mercury**, Mr. Brudenell Carter incised the swollen optic nerve sheath, and allowed the contained fluid to escape. He first divided the external rectus and rotated the eye inwards till the swollen nerve sheath was exposed to view. There was immediate relief from headache. In ten days the swelling of the optic disc was reduced by one-half, and the recovery was uninterrupted.

From Deutchmann's researches and experiments on optic neuritis, it follows that where loss of vision is threatened from papillitis of any kind, the indication is to immediately incise the distended optic nerve sheath, and drain away the dammed up retrobulbar infecting fluid.

Tobacco Amblyopia.—Alt always insists on the total abstinence from

tobacco during the treatment of these cases. Among drugs he mainly relies on **Strychnine**, a dose of which subcutaneously has sometimes caused an improvement of two or three hundred per cent. in the central acuity of vision within five minutes. If the subcutaneous injection of $\frac{1}{2}$ or $\frac{1}{16}$ of a grain of nitrate of strychnine caused no improvement in vision, he would give a very doubtful prognosis. He increases the dose until it causes headache, dizziness, or other unpleasant symptoms, sometimes giving as much as $\frac{1}{4}$ or $\frac{1}{3}$ of a grain hypodermically ("American Jour. Ophth.," 1887).

Myopia.—In low and moderate grades of myopia without extensive choroiditis, Förster recommends the wearing of glasses which fully correct the ametropia. In the case of children he, at the same time, orders the use of a head rest so that they shall not be able to bring their eyes too close to their work; in older patients this point is strictly enforced, without any artificial appliance. He considers that the increase in the myopia is due to the excessive convergence which is necessary if the patient has to bring the object close to the eyes. This excessive convergence causes pressure on the globes, and thus produces the increase in the myopia; the accommodation, as is maintained by some authors, not being at all in fault.

In high grades of myopia where the full correction of the ametropia would cause a considerable diminution in vision, Förster leaves a portion of the myopia uncorrected—4D is the writer's practice—and he combines the glasses with prisms, having their bases directed inwards, so as to diminish the effort of convergence.

OTITIS. (See "Ear, Diseases of.")

OVARIALGIA *Skene Keith, M.B., F.R.C.S.E.*

Occurs in women who are, as a rule, subject to neuralgia elsewhere, and the diagnosis is made by a consideration of this fact, and by the failure to discover any altered condition of the ovaries. The treatment must be directed to improvement of the general condition, with, if possible, residence, at least for a time, in a warm climate. Operative interference is never called for in such cases.

OVARIOTOMY. *Skene Keith, M.B., F.R.C.S.E.*

During the past year the diagnosis of ovarian tumours has been for the most part pushed into the background by brilliant operative feats and lists of cases by Tait, Goodell, Terrier, and others, of great interest, showing the marvellous advance which has been made in abdominal surgery in the last few years; but which, unfortunately, do not give those, who as a rule, are first called in to see enlargements of the abdomen, as much information as they perhaps desire. The difficulty

which lies in the way of giving good directions for the satisfactory diagnosis of ovarian tumours, consists in the fact that these tumours vary greatly in size, in shape, in consistence, and in their history. They may be a few ounces in weight, or they may weigh 100 lbs. or more ; they may be smooth or irregular in contour, hard or soft, and they may grow to an enormous size in a few months, or occasionally at the end of several years, may not fill the abdomen. The diagnosis must be then mainly one of exclusion, and the first abdominal swelling which must be put out of the list of possibilities is pregnancy. In the unmarried, one is naturally on one's guard, and mistakes are more often made when women who have borne children become pregnant, and for some reason or other, come to the conclusion that they have a tumour. When there is a suspicion of pregnancy, it is as well to put the history out of account, as that is easily manufactured. On examining the abdomen, it will be usually found that the swelling is somewhat soft, with an indefinite outline, and with hard, irregular masses lying underneath. With a little manipulation fœtal movements may be felt, or the tumour is found to become firm and contracted. It is not safe to rely on the so-called uterine souffle, as that sound is sometimes heard in ovarian tumours, where there are large sinuses. The cervix, even when pregnancy is well advanced, is not always particularly soft, nor does an open vagina mean conception. When there is any doubt, it is better to temporise.

Distension of the abdomen with ascitic fluid is frequently mistaken for cystic disease of the ovaries. Careful percussion here is of the utmost importance. A tympanitic note midway between the pubes and umbilicus, on deep percussion with a dull note in both flanks is almost diagnostic ; but it must not be forgotten that the mesentery does not allow the intestines to float up an indefinite distance, and also that the bowels may be so matted together and fixed by adhesions as to prevent any tympanitic note being obtained. But it is never safe to give a positive opinion until the abdomen has been emptied of fluid, either by tapping, or by the more formidable exploratory incision. It is not rare to find a ruptured ovarian tumour accountable for the distension.

Uterine fibroids frequently resemble ovarian growths. As a rule the fibroid is of slow growth, and there is often increased or profuse menstruation. The tumour, unless it be of the fibro-cystic variety, is hard, often irregular, and on making a pelvic examination, it will be found that the cervix uteri is affected by movements of the uterine mass. The sound is of assistance, when it can be passed four or five inches, and a cavity of eight or nine inches can be probably only met with

in connection with a fibroid. Unless there be hæmorrhage, the general condition is good, and as a rule women with fibroids take on flesh.

These three conditions are those which are most frequently mistaken for ovarian tumours, but the abdomen has been opened for the enlargements of the liver and spleen, for tumours of the omentum, pancreas, and kidneys, or for flatulent distension, all with, or without ascites, when it was expected that an ovarian tumour would be found.

In coming to a conclusion whether a tumour is an ovarian one or not, particular stress must be laid on the following points, always bearing in mind that there is no rule without an exception :—A history of from a few months to two years' duration, with sometimes occasional attacks of pain, loss of flesh, chiefly about the chest and arms, no disturbance of menstruation, and no shortness of breath. The mass is found to be; unless it has ruptured, smooth, with evident fluctuation, if a single cyst, or with a feeling of fluid at some point, if multilocular. In the pelvis, there may be no tumour within reach, and on moving the abdominal growth, the uterus will not be affected. Should there be tumour in the pelvis, it will be felt to be continuous with the growth above, and the uterus will not be enlarged. There will be a dull note over the whole anterior surface of the abdomen, and this will not change when the position of the patient is altered; the flanks may or may not be tympanitic. When it is doubtful whether a tumour is cystic or not, the matter may be settled by inserting a fine hollow needle attached to an aspirator into the growth. This means of diagnosis is not as often adopted as it ought to be, because harm has resulted from the partial emptying of cysts. In every case where a cyst is punctured, the whole of the fluid must be withdrawn.

The preparation of the patient for the operation of ovariotomy is now extremely simple, consisting in the administration of a dose of laxative medicine early in the morning of the day before, and light diet during the day, and the thorough washing of the skin of the abdomen. For the operation one requires a bistoury, a pair of scissors, catch forceps, trocar, cautery clamp and irons, needles, silk, catgut, and sponges. The patient is anæsthetized in bed, and lifted on to a table; the length of the incision will vary with the operator, and with the amount of difficulty of the operation. It is a mistake to hamper one's movements by making the opening too small. The tumour is tapped, and if non-adherent is drawn out, the pedicle cauterised or ligatured, and the wound closed, a very simple procedure when there are no adhesions. Adhesions, if extensive, add greatly to the danger and difficulty of the operation, and if vascular,

must be ligatured. When the second ovary is large, it must be removed; when it is doubtful whether it is diseased or not, it should be left alone if the woman be young, removed if she be old. Everything must be done with the utmost attention to cleanliness, and the discussion still continues whether one can be aseptic, *i.e.*, clean, as well without as with antiseptics. The wound seems to heal under any dressing, and there should never be any discharge.

There is nothing new to note about the after treatment, except that opium is used much less frequently, and in smaller quantities than it used to be. It is not advisable to hurry the convalescence, and nothing is gained by trying to send patients home much sooner than three weeks after the operation. Attention has been drawn lately to the occurrence of parotitis after ovariotomy; but there seems to be no doubt that this accident occurs as often after other operations in the neighbourhood of the pelvis, as it does after ovariotomy.

OVARITIS *Skene Keith, M.B., F.R.C.S.E.*

Is usually accompanied by more or less surrounding inflammation. The leading symptom is that the pain becomes worse a few days before menstruation. On examination, the enlarged, tender ovary can be felt. When the regular treatment, consisting in rest, iodine, glycerine, and hot water has been fairly tried, and has failed, it becomes necessary to consider whether it is justifiable to remove the ovaries. It is very doubtful whether it is worth while to operate on those women who have never been very strong, who have always had an ache or a pain somewhere, unless they are able to have every care for perhaps as long as two years after the operation, and only then when the disease is very marked indeed. In such women it is better not to operate when there is any doubt about the amount of disease present. But for the woman who has, previous to the commencement of the disease, been in good health, operation is full of the brightest hope.

OZÆNA.

As internal remedies the **Chloride of Gold** and **Hydrastis Canadensis** have been used with some success. The form is specially indicated when the bones are diseased. **Cod Liver Oil, Iodide of Potassium** and **Mercury** are also used for the strumous or syphiltic diathesis upon which the disease depends. Local applications are always advantageous. Dr. Loewenberg uses **Corrosive Sublimate** (1 to 10,000) solution for irrigating the nose, and afterwards insufflates powdered **Boracic Acid**. Moure uses a nasal douche with a solution of **Chloride** and **Bicarbonate of Soda** to soften and detach the crusts.

Afterwards he irrigates with antiseptic lotions, and finally insufflates astringent powders, boracic acid, etc.

Dr. S. Solis-Cohen considers a solution of **Hydrogen Dioxide** (10 vol., diluted, if necessary, with one or two parts of distilled and aromatized water) the best detergent and disinfectant in fœtid coryza; and ascribes to it a certain power in stimulating the reproduction of healthy epithelium. **Ethyl Iodide,** by inhalation, is also said to be valuable.

Carbolised Iodine Solution.—A douche made as follows frequently proves useful:

Tincture of Iodine	45 parts	Glycerine	450 parts
Absolute Phenol	6 ,,	Hot Water	2250 ,,

PALPITATION.—(See "Heart.")

PANCREAS (Surgery of). *A. W. Mayo Robson, F.R.C.S.*

Although Billroth has successfully removed a cancer of the pancreas ("Wien. Med. Woch.," April 3, 1884), it may be said that the surgery of the pancreas is practically limited to the treatment of cysts; and in the majority of those which have been operated on, the diagnosis has not been previously made. Küster (see "Med. Chronicle," April, 1887) was enabled to diagnose a case before operating. In this, there was cardialgia, followed by symptoms of gastro-enteritis. After recovery from these troubles, an epigastric tumour was found, which was at first regarded as hydatid of liver. It was discovered, however, that when the patient stood erect, the tumour fell away from the liver, leaving a tympanitic area of 3 cm. wide. There was pulsation without expansion, and exploration yielded a dirty yellow, albuminous fluid containing blood cells and granule cells. After laparotomy the cyst was aspirated and then opened, the edges being stitched to the skin. Uninterrupted recovery followed. Other successful cases by the same method have been reported by Senn, Kulenkampft, Gussenbauer, and Haker.

Bozeman excised a pancreatic cyst, recovery following; but in other hands, this operation has never succeeded.

Simple tapping or aspiration offers little prospect of success, as the fluid re-collects.

Dr. Senn ("Internat. Jour. Med. Sc.," July and Oct., 1886, and Jan., 1887) has by experimental and clinical investigation endeavoured to lay the foundation for the surgical treatment of various diseases of the pancreas. For a synopsis of his papers, see "Med. Chronicle," March, 1887.

Dr. Draper ("Boston Med. and Surg. Journ.," Oct. 28, 1886) reports

five cases in which sudden death was due to pancreatic hæmorrhage. Zenker had previously attributed such deaths to pressure on the solar plexus.

PAROTITIS.

Stephen Paget has collected sixty cases of this disease following pelvic or abdominal disease. Twenty-three cases were fatal; ten occurred after ovariotomy. One woman had an attack during six successive pregnancies. He thinks the parotid is related to the peritoneum and to the generative organs; that parotitis without pyæmia may follow an abdominal or pelvic lesion, and that if this occur late in a patient not exhausted by his primary disease and with sound kidneys, recovery is probable. President Garfield's case is included in the series.

PELVIC INFLAMMATION. *T. Savage, M.D.*

In the following remarks the term pelvic inflammation applies to those conditions hitherto known under the name of pelvic cellulitis or parametritis, and pelvic peritonitis or perimetritis. Since the first investigations into these conditions, we have made great advances in our knowledge, and for this in years gone by we owe much to the labours of Bernutz, Schroeder, Nonat, Virchow, Simpson, Matthews Duncan, and others; but the results of abdominal section in more recent years have thrown still more light upon the nature of these affections, and have more clearly defined their causes and pathology in the great majority of cases. And so far as these are known, by so far can a rational treatment be expected; and not only expected but applied.

I want to lay down the proposition, first of all, that in nearly all cases that occur of pelvic inflammation, the cause is to be traced to some inflammatory condition, septic or otherwise, in the ovaries, fallopian tubes, or both together. I do not, at present at all events, deny the existence of pelvic cellulitis or parametritis, *i.e.*, inflammation with exudation, and perhaps suppuration, outside the peritoneum in the areolar tissue of the broad ligament and neighbouring parts, because I meet with an instance occasionally where the signs of a retroperitoneal phlegmon are undoubted. But from repeated observation of cases, verified afterwards, not by a *post mortem* examination, but by abdominal section, I know that the most frequent cause of a case that is usually diagnosed as pelvic cellulitis will be found to be a large mass on one or both sides of the uterus, formed by the Fallopian tubes, enlarged, inflamed, full of exudation, and perhaps pus, and, by their size and adhesions, more or less fixing the uterus. A history and symptoms as follows, modified more or less according to the particular

individual, are not infrequent. After a confinement or abortion, especially if accompanied by an unyielding, and therefore probably by a torn cervix, a prolonged labour necessitating instruments, or a chill, the patient has symptoms of general pyrexia, with some local external tenderness, and, maybe, considerable internal pain. On vaginal examination the uterus is found to be fixed more or less: on one or both sides there is to be felt a mass hard and very tender, sometimes giving the true feeling of what Sir James Simpson termed a "board-like" hardness, as if growing from the pelvic wall. The patient, if subjected to expectant treatment, goes on getting either a little better or a little worse. In the former case a considerable amount of resolution takes place. The swelling will become smaller and softer, and a more or less appreciable mass will be left behind, consisting of altered tube and ovary, adherent to each other, occluded tube, and the organs adherent perhaps to uterus and intestines. With this the patient recovers a varying amount of health. In a few cases she is enabled to enjoy and lead an active life, but in the great majority invalidism of every degree results, rendering the patient quite unable to do her work in the world. If an operation is resorted to, and the abdomen opened, it will be found that in the earlier stages the tubes are *enlarged*, *œdematous*, and occupied by exudation, involving also the ovaries; and that the parts in the true pelvis are probably all glued together with recent adhesive lymph. Removal at this stage is easy, safe, and effectual. The objection to operation, viz., that it induces sterility, is immediately disposed of by any one who sees the condition of the organs at the time of operation. We cannot suppose a woman would be likely to conceive after having her tubes distended, adherent, occluded at the ends, and with the ovaries also adherent, thereby causing the destruction of their mutual relation to each other. Do we not see numberless instances of acquired sterility in these cases? We find a woman marries in good health, has a child as soon as she can, her labour is followed by an illness of an inflammatory character, or by a prolonged convalescence, and the so-called pelvic cellulitis is detected on examination. The most approved expectant treatment is adopted, but the patient is thenceforth sterile. Were she cured she ought in a reasonable period to have more children, but she does not; something, some change, has taken place in her pelvis, which acts as a bar to further conception.

If the patient gradually gets a little worse the swelling increases in size, sometimes considerably, with the accompaniment of one of several conditions, *e.g.*, hydrosalpinx, a collection of pus, abscess of

the ovary, or a tubo-ovarian cyst. Sometimes there is merely an enlarged state of the tubes, which are highly injected, and seem to be in a species of chronic salpingitis. The pus (variable in quantity, from a drop or two to several ounces), has several modes of exit. It may escape from the tube end into the peritoneum, and would then be rapidly fatal, unless immediate operation were resorted to. I have recently had two successful cases of purulent peritonitis, where there appeared to be every reason to suppose this had occurred, and in which urgent symptoms, having developed themselves, were recognised by the gentlemen in attendance, and were relieved by operation. Or the pus may burst directly, as from an abscess, and will require the same heroic and radical treatment. But I suppose most frequently the pus escapes, assisted by the previously formed adhesions, into one of the natural cavities, *e.g.*, intestines, or bladder, the former the most frequently, or through the vaginal roof, and so outwards.

Variations occur in the conditions which are present in different patients. Sometimes the uterus is scarcely, if at all, fixed, and in others it is quite immovable. In some the tubes are in a state of salpingitis, without any abnormal contents, whilst simultaneously there is an abscess of the ovary. I think hydro-salpinx is often a stage antecedent to pyo-salpinx in the sequence of events ; and, when matter occupies the tubes, it may be either in the form of laudable pus, or inspissated, and of a cheesy character. Pyo-salpinx is, as a rule, to be met with in younger women. It is rarely seen after 45. The cases where there is no very distinct swelling to be felt per vaginam, and which yet present acute and sometimes formidable symptoms, are those which many have been accustomed to denominate under the head of pelvic peritonitis, perimetritis (French perimetrite) and perimetric phlegmon. Here, if no pus is poured out, or tumour discovered, resolution may so far advance as to leave in the course of a few months no physical signs whatever. For practitioners who see few of such cases it is difficult to believe that the patient can have much the matter with her, and her frequent complaints may be attributed to hysteria, excessive emotion, debility, too great mental concentration on subjective sensations, and other causes. It is only when the parts are actually seen and touched that we can appreciate what has taken place, and the reality of the patient's sufferings. In an abdominal section the organs will be found adherent to each other, the uterus to the sacrum, and the ovaries perhaps imbedded in the broad ligament, as in a nest, or to the pelvic wall, by firm bands which bleed freely on being torn through.

This displacement of organs, when found, will easily explain the pain, the inability to walk, the dysmenorrhœa, or menorrhagia, and the dyschezia, from which the patient suffers, but of which, before the operation for removal there were little or no objective signs.

The cases of tubo-ovarian cyst are not easy to explain, they seem to depend upon, or be caused by, inflammatory changes, which produce in all cases adhesion of ovary to tube, and of these to the pelvis. Frequently I have noticed, in addition, extensive intestinal adhesion. A tumour, varying in size from a walnut to an orange, will be found. The cyst wall is generally very friable indeed, and may sometimes be picked away bodily from the bed or base in which it has been developed. The fluid is usually of a serous character, varying in its degree of dark colour. In one case, the first that I met with, the cyst came away by itself entire; with this I contented myself without removing the ovaries and tubes, and the patient was cured. She has remained quite well since. She was, from the adhesions, sterile, and of course has remained so. In two other cases a cure has also been effected without removing the tubes and ovaries by simply tearing open the cyst, and draining it and the pelvis.

In regard to the various symptoms and the diagnosis of the conditions of the tubes, etc., which, according to the view expressed above form the vast majority of cases of pelvic peritonitis and pelvic cellulitis, I believe that perfect accuracy is not likely to be attained. We find the text books giving us certain signs and symptoms by which the one disease can be differentiated from the other. From repeated careful observation of the physical condition before operation and actual inspection of the parts by abdominal section, I am led to look upon these differences very largely as a species of hair splitting, and my experience tells me that in 19 out of 20, or even more, of the cases, of what would be designated pelvic cellulitis, I shall find some definite disease of the Fallopian tubes, or ovaries, or an abscess in the ovary. In the odd exception, I do find, perhaps, an extra-peritoneal exudation or collection. Of late years we have certainly cleared the ground considerably in inflammatory states of the abdominal contents since we have come to regard acute peritonitis rather in the light, not of a disease, but of a symptom, and idiopathic peritonitis as rarely if ever existing.

If we accept the view that nearly all these cases of para and perimetritis are in reality a diseased condition, whether septic or not, of the uterine appendages, then we must come to the conclusion, for the benefit of the patient, that removal is the best remedy, and, in fact,

the only remedy of real value. I say "'if' we do accept the view;" although, indeed, I do not see how we can do otherwise if we have seen instances of most marked disease, which would be universally recognized as pelvic cellulitis, and then find, on opening the abdomen, that removal of extensively diseased appendages removes all traces of the disease and cures the patient.

When operation is performed early in the case, and when the symptoms are more acute, and limited to one side, removal of the diseased side may be sufficient, although, as a rule, both sides require removal. In 1882 I stated in a paper on "Diseases of the Fallopian tubes," that it was, in my opinion, generally speaking, advisable to remove both sides in all cases of hydro- and pyo-salpinx. This view was opposed at the time, but I gladly see that my opinion of that date is being accepted as the right one. Both hydro-salpinx and pyo-salpinx have a tendency to be symmetrical, and after one side has been removed, the other side being left untouched and healthy, it has, in numerous instances, been necessary subsequently to remove the second side on its assuming a diseased condition similar to its fellow previously.

Some practitioners, especially the older ones, and of them I wish to speak with the respect which is their due, may object to my proposition, and will say that they have seen abundant cases where the inflammation was in the connective tissue, that the phlegmon there situate went on to suppuration, and finally burst into the rectum or vagina, the patient thenceforth recovering. To this, I have only to say that one statement is as good as another until proved to the contrary, and that I have the advantage on my side in that their diagnosis has not been verified, whilst, on the other hand, my diagnosis of disease of the appendages, rather than of cellulitis as ordinarily understood, can be made out and proved by actual inspection to be what it is alleged to be. What is wanted is for practitioners to see these cases for themselves. Specimens of the parts removed, unless seen immediately, fail to give an adequate and convincing illustration. They first of all shrink directly after being cut away, and the shrivelling action of spirit completely takes away the appearance and form which they possessed when constituting a part of the living body.

It has recently been proposed to treat some of these inflammatory exudations by the electrolytic method, using the negative galvano-puncture. Of course, at present, electrolysis must be regarded "*sub judice*"; and I am inclined to think very favourably of its use in myoma, for which I have used it a number of times. For tubal in-

flammations I have not yet tried it, nor do I at present intend to do so. The puncture cannot be considered free from risk, and when the diagnosis, as is so frequently the case, cannot be absolutely infallible, I would forbear to use the puncture. On the other hand, it is easy to imagine that a needle passed through Douglas space into a pyo-salpinx, which was well shut off from the general peritoneum by adhesions, might have a curative effect in discharging the contents and setting up a sinus, quite apart from any electrical influence that might be induced in addition.

I am convinced that the frequency of tubal disease is much greater than is commonly supposed. It has been computed that 10 to 17 per cent. of out-patients at a gynæcological department suffer from some form of acute or chronic inflammatory affection of the appendages, and I should be inclined to put it at even a higher figure. What proportion these bear to the general female population it is impossible to say, but it must be very considerable. Of course I do not mean to say that all these cases require operation. The question of operation is so frequently one of degree—how much the patient suffers, and how far she is incapacitated from attending to her duties. Women who can command luxuries, comforts, and an easy life will not require operation nearly so frequently as their poorer sisters who have families and have to work for their living.

I need only mention gonorrhœa, either present or latent, as one of the commonest causes.

In past years, when our attention and treatment were almost exclusively directed to the uterus and its ailments, we not infrequently lost sight of the real cause of trouble from which our patient was suffering. We now seem to be attaining to a more rational method, for, while not ignoring the uterus and the treatment of its own legitimate affections, we are coming to see that a large number of previously unsuspected ailments take their origin higher up in the sexual system, in organs of superior physiological import. And we are giving to the uterus its natural, viz., a secondary, position. And, *a priori*, when we take into account the mobility, the cyclical changes, the subjection to normal and abnormal excitement, etc., to which the ovaries are liable, this is what we should expect. Would it not be more reasonable to say that the uterus is an appendage of the ovary, rather than that the ovary is one of the uterine appendages?

PEMPHIGUS. *N. Whitelaw Burns, M.D.*

Senator describes a case of acute pemphigus in a young girl, who on the third day was the subject of discrete bullæ filled with pus,

varying in size from a pea to a hazel nut, resting on an inflamed base. On the fourth day the bullæ had disappeared, and healing took place without cicatrices. He does not look upon the case as a primary affection of the skin, but groups it with the acute exanthemata. ("Deutsche Med. Wochensch.," No. 1, 1886).

TREATMENT.—Hutchinson has long looked upon **Arsenic** as a specific in pemphigus. Duhring also speaks highly of the drug, which must be given in increasing doses, and the preparation varied if it is found to disagree. McCall Anderson recommends subcutaneous injections of **Arsenic** or **Quinine**; 5 minims of **Fowler's Solution** in double the quantity of distilled water, to be injected once or twice in twenty-four hours. **Quinine**, 2½ grains, dilute **Sulphuric Acid**, 2½ minims, in 15 minims of water, as an initial dose. As the injections are irritating, he advises the needle to be plunged into the cellular tissue, where parts are little sensitive, as about the hip. ("Diseases of the Skin.")

PERITONITIS. *A. W. Mayo Robson, F.R.C.S.*

The surgical treatment of localised peritonitis is already old, but recently, several valuable contributions on the subject have appeared. (See paper by Dr. Fitz, Perforating inflammation of the Vermiform. Appendix, "Inter. Journ. of Med. Sci.," October, 1886; see Dr. Blanc, Gangréne de l'appendice ileo-cæcal "Lyon Med.," December, 1886; see Dr. Truc, "Thèse de Paris," 1886; see Dr. Coates, "Lancet" January 15th, 1887; see Dr. R. F. Weir, Laparotomy for Perforation of Appendix Vermiformis, "Med. Record," June 11th, 1887; see Laparotomy for Perityphlitic Abscess by Dr. Homans, "Boston Med. and Surg. Journ.," April 29th, 1886; see Becker on the Treatment of Peritonitis Appendicularis by Incision "Copenhagen Hosp.," December 22nd, 1886; and Gaston on the Surgical Relations of the Ileo-cæcal Region, "Journ. Amer. Med. Assoc.")

Fitz, in his valuable monograph, which is based on 257 cases of perforating appendicitis; along with 209 cases of typhlitis and perityphlitis; shows that the most common cause of encysted peritonitis is perforative inflammation of the vermiform appendix.

Death may occur from shock after perforation within the first two days; or from general peritonitis the result of extension, within a week; or from rupture of the encysted peritoneal abscess within a fortnight; or later from exhaustion. Although spontaneous evacuation may occur, it is apt to lead to dangerous complications. Whilst in a proportion of cases resolution may occur, it is dangerous to wait long for it.

It would seem that sudden pain in the right iliac region, followed

by fever, and later by circumscribed swelling, especially if occurring in a young male who has previously suffered from pain in the same region, is almost absolutely diagnostic of perforating appendicitis.

Treatment.—At first, by rest, **Opium** and liquid food, avoiding aperients; if resolution do not appear and there be no urgent symptoms, the formation of a tumour may be awaited; it must be remembered however, that the majority of cases that die, die soon, and that if operation is to succeed it must be undertaken early; Dr. Fitz recommends operation on the third day and says that general peritonitis is no contra-indication.

Probably the best operative procedure is to make an incision over the tumour and to provide for effective drainage of the encysted peritoneal abscess. If the peritoneal cavity be opened it must be irrigated and drained after the perforated appendix has been ligatured at its base (not too tightly) and removed, the serous coat being sutured over the cut mucous membrane.

The treatment of general peritonitis must be numbered among recent surgical triumphs, and during the past year several important contributions on the subject have appeared.

The *medical* treatment of general peritonitis is by **Opium**, absolute rest and liquid food, and by hot fomentations or **Turpentine** stupes applied to the abdomen.

The *surgical* treatment may be discussed under three heads.

(1,) *Traumatic peritonitis* is treated of under "Abominal Injuries," and for further information on the subject see Sir W. MacCormack, "Abdominal Section for the treatment of Intra-peritoneal injury," 1887. The *peritonitis following Abdominal Section* is discussed briefly under the article "Laparotomy"; for detailed information, see "The condition and management of the Intestine after Abdominal Secton" by Dr. J. D. Malcolm at the Roy. Med. Chir. Soc., October 25th, 1887, with the subsequent discussion.

The author of the paper assumed that a local peritonitis must occur whenever the peritoneum was divided and did not heal by first intention, but that general peritonitis "apart from septic influences" was very rare. Septic peritonitis was described as a combination of peritonitis, blood poisoning, and paralytic intestinal obstruction; the paralysis being due to inflammation of the coats of the bowel.

The treatment of vomiting and abdominal distension, by the early administration of purgatives (after the plan of Mr. Lawson Tait) was advised; the explanation given being, that purgatives acted beneficially, simply by stimulating the exhausted bowel to perform its

function; the bowel having been exhausted at the time of operation from too great stimulation of the sympathetic nerves, which stimulation probably also caused an excessive formation of gas in the intestine.

It was advised that if general peritonitis supervened, it should be treated by drainage, rest and suitable nourishment administered per rectum, and by the subcutaneous administrations of **Morphia**; purging being then dangerous and inefficacious. Mr. Thornton said he had never saved a life by the *after insertion* of a drainage tube. Mr. Meredith preferred the administration of **Belladonna** to Opium.

(2,) *Perforative peritonitis*, in which there is usually profound shock rapidly followed by acute peritonitis. Dr. Dreschfuld (on some points in the diagnosis and treatment of Perforative Peritonitis, "Med. Chron." November, 1887) advises operation in perforative peritonitis where the symptoms previous to perforation have been slight, and where the onset has been acute; these cases being likely to end fatally if not operated on; but where there is a previous history of peritonitis and the onset is less acute, the patient rallying from the shock, he thinks a spontaneous cure may be hoped for. The early symptoms which he relies on are,—sudden pain, shock, more or less severe, rigidity of abdominal walls, tympanites and *absence of liver dulness*. He employs as an aid in diagnosis, puncture with Southey's trochar, which draws off odourless gas if the stomach be perforated and fæcal gas if the intestine has been injured. Vomiting, which is so common in ordinary, is often absent in perforative peritonitis. The temperature is no guide.

The later symptoms are those of ordinary peritonitis; costal respiration, wiry pulse, pinched features, abdominal tenderness and pain, and ultimately collapse and death. (See Dr. Sinclair, case of Gastric Ulcer with perforation and peritonitis, without collapse, abdominal incision, death in six days, "Med. Chron." May, 1887; see Lücke, Laparotomy and suture of intestine in perforating typhoid ulcer, "Deut. Zeit. f. Chir. Bd. 25, p. 1). The discussion on Mr. Barwell's paper at the Clinical Society, October 28th, 1887, may be read with profit.

(3,) *Suppurative peritonitis* may be a sequel of the last variety; may complicate a general blood-poisoning; or may be caused by extension from a local peritonitis, *e.g.* perforating appendicitis.

In the last case the symptoms frequently resemble those of intestinal obstruction.

However induced and whenever diagnosed, general suppurative peritonitis has but one treatment—abdominal section. Kroenlein (Operative treatment of acute diffuse purulent peritonitis, "Arch. f.

Klin. Chir.", Bd. 38, p. 507), quotes Lawson Tait's dictum, that the surgeon should operate as soon as he is in doubt as to the issue of the disease, and the patient's life is imperilled.

In local peritonitis, the incision is made over the focus of disease, but in general peritonitis laparotomy is performed by a median incision, which at first may be made only ½ to 1 in. long, or just sufficient to give exit to the purulent contents and to drain the serous sac. If the patient be extremely ill and unable to bear more, this may suffice until he rally, when irrigation may be instituted, and as soor as prudent, the cause, if removable, may be treated.

In irrigation, Mr. Lawson Tait (methods of cleansing the Peritoneum "British Gynæcological Journ.," August, 1887) uses a curved trochar with a bevelled blunt edge and two eyelets, the fluid being syphoned into the abdomen either in a rapid stream or more slowly according to the nature of the matter to be removed, the soiled intestines being gently moved about by the fingers.

The fluid employed, which may be water that has been boiled, or some mild antiseptic solution such as **Boracic Acid**, should have a temperature of 103° to 107° Fah. For drainage, a glass tube is used with preforations all the way up the sides. When it is for general drainage the tube is left in three or four days, but for suppurating cavities it must be left in longer, and after the fourth day replaced by a soft rubber tube.

In Tubercular Peritonitis, laparotomy with subsequent cleansing and drainage has proved beneficial in a number of cases. Sir Spencer Well's historical case, in which the patient was well 22 years after the operation is a case in point. Mr. Tait claims a uniform success so far as the operation is concerned, with a complete cure of the disease in 80 per cent. of all cases of tubercular peritonitis in which the abdomen was opened, cleansed and drained. (See interesting discussions on Dr. Clarke's and Mr. Knaggs' papers at the Clinical Society, October 28th, 1887; see also, the treatment of Tubercular Peritonitis by laparotomy, "Wien. Med. Woch," 1887, Nos. 11, 13, 14, 15 and 16).

For other references see Truc, "Thèse de Paris" 1886; see Dr. Gill Wylie, "New York Med. Rec.," March 19th, 1887; see Dr. Ogle, on relieving tympanites by puncture of the abdomen, "Lancet" July 9th, 16th and 23rd, 1887. For a description of the surgical treatment of peritonitis see Greig Smith, "Operative Surgery" 1887, p. 426, et seq.

PERITYPHILITIC ABSCESS. (See "Abscess.")

PERTUSSIS. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

During the past year the usual number of new remedies for whooping cough have been brought forward, for each of which it is claimed that it brings the disease to a more speedy termination than any other. Though no further proof of the parasitic origin of the disease has been advanced lately, many of the most successful modes of treatment are found to be antiseptic in action.

Local applications have been advocated of late as the most effectual measures in pertussis. They take the form of nasal insufflations of powders or of liquid applications painted over the pharyngeal region. **Resorcin**, 1 to 2 per cent. solution, advocated by Moncorvo a year or two ago, is again recommended by Dr. Barlow; the solution is to be painted over the throat at intervals of two hours day and night, unless the child sleeps. He claims that the drug rapidly reduces the number and intensity of the paroxysmal attacks of cough, and shortens the duration of the disease. A solution of **Cocaine** may be applied just before the resorcin. It is important to obtain good specimens of the drug. Five per cent. solutions of **Hydrochlorate of Cocaine**, painted on every two hours, as the effect soon passes off, is a mode of procedure which is said to reduce the number of fits of coughing almost immediately, with improvement of the child's health.

Nasal Insufflations. **Quinine** in this form is highly recommended, either alone or combined with other antiseptic powders. Bachen obtains good results from a powder composed of 100 parts **Hydrochlorate of Quinine** and 5 parts **Gum Benzoin**, 30 grains to be blown into the nose in the twenty-four hours. Michael also finds that this powder is more successful than any other, next to it in usefulness he places one composed of **Tannin** and **Carbonate of Lime**. Of less value are **Iodoform, Boracic Acid, Salicylic Acid, Bicarbonate of Soda**, and **Cocaine**. Mr. Holloway finds, however, that **Boracic Acid** insufflations give very good results. Nasal douches also are used; the most effectual antiseptic nasal douche seems to be a 1 to 500 solution of **Corrosive Sublimate**, care must be taken that only an inappreciable quantity of this is swallowed. Instead of douches or snuffs; ointments, glyceroles, or lotions may be applied to the mucous membrane with a camel's hair brush. An ointment composed of a half a drachm each of **Eucalyptol** and **Iodoform** to an ounce of **Vaseline** is said to be successful, and **Boroglyceride** or lotions of **Corrosive Sublimate** may be used in the same way. Dr. Pick still maintains, as originally recommended by him three years ago, that inhalations of **Carbolic Acid** form the best mode of

treatment; 10 or 20 drops of the pure acid on cotton wool placed in a mask are inhaled, this amount being renewed three times daily, and the inhalations carried on for several hours each day. No ill effects have been observed to follow this plan. Baginski states, however, that this method is of little or no value, and in the case of very young children, even dangerous. We have found inhalations of **Eucalyptol** in hot water to be apparently of benefit.

Dr. Mohn, a Norwegian physician, recommends the following plan of treatment by **Sulphurous Acid** fumigation. "The patients are dressed in clean linen and taken from their bedrooms to another room. In their absence everything the sick room contained is arranged so as to allow thorough penetration by the sulphur fumes. Six-and-a-half drachms of sulphur per cubic metre of air space in the room are burned, and the room closely sealed up for five hours. In the evening the child is taken back to the room, and put in a bed that has been disinfected. He awakes the next morning cured." His adoption of this plan was due to an accidental discovery in the case of a patient suffering from both scarlatina and whooping cough; after the scarlatina had subsided, fumigation was carried out with the result that the whooping cough was also cured.

Internal Remedies. Dr. B. W. Richardson recommends **Peroxide of Hydrogen.** The following is his formula:—

Hydrogen Peroxide (10 vols. strength)	℥vj	Glycerine, pure Aq. Destill. ad	℥iv ℥iij

M. S. ℥ss five or six times a day.

M. Neltier, of Nancy, and a colleague corroborates his statements, during a long and extensive experience has found no remedy come up to **Oxymel of Squills** in value: it is necessary to ascertain that the squill used is good. Cases that have been going on for weeks yield to oxymel of squill in a few days.

Dr. Suckling confirms Mr. Cory's statement as to the value of **Carbolic Acid** administered internally; he gives the glycerine of carbolic acid in doses of ♏ss to children one year old, the dose being increased in proportion to the patient's age. He found that the duration of the illness was reduced to two weeks or less, while under other plans of treatment it lasted a month. My experience of this remedy has been that it certainly reduces the violence of the fits, but not the duration of the disease.

Quinine in strong doses is generally of benefit, and especially in cases, where the attacks of coughing assume a periodic character, being more severe on alternate days.

Cocaine has been recommended quite lately, in doses of from $\frac{1}{12}$ to $\frac{1}{4}$ or $\frac{1}{2}$ a grain, according to age, three times a day. In a few cases in which I gave it, it certainly seemed of great benefit.

During two epidemics of whooping cough Sonnenberger found **Antipyrin** of more use than any other medicine. He gave 7½ to 15 grain doses to older children and adults, and a $\frac{1}{4}$ to $\frac{1}{8}$ grain to very young children. Four doses to be given in the twenty-four hours in powder. The remedy should be given in as early a stage as possible, and be continued some little time after the attacks have ceased, otherwise they are liable to return.

Amongst older and better known remedies **Belladonna** alone, or given in combination with **Oxide of Zinc** in gradually increasing doses, is successful in many cases. The **Bromides** are useful in some cases, but fail utterly in most; they may be given in full doses for some time without ill effects. **Chloral Hydrate** is not effective until it produces slight narcosis, a method of treatment therefore, that requires great care and watchfulness in children. Dr. Bartholow uses **Atropine** in doses of $\frac{1}{240}$ to $\frac{1}{120}$ grain of the **Sulphate** instead of belladonna. Dr. Eustace Smith finds **Quinine** and **Alum** of especial benefit in the declining stages.

Finally the child should be kept in one or two well ventilated rooms at an equable temperature of about 65°, and especial care should be taken that he be not exposed to cold. The diet is to be light and nutritious, and rest and quiet is advisable. Should catarrhal pneumonia, the complication most to be feared, in spite of all precautions, unfortunately ensue, the treatment will merge itself into that for this disease (q. v.).

PHARYNX (Diseases of). *Prosser James, M.D.*

Dr. Raven has reported in "Practitioner" an epidemic of *exudative tonsillitis* in children in an institution. During August and September some 60 cases occurred. There was high initial temperature, often 105° F., flushed faces, and membranous patches on tonsils, lasting five to seven days; frequently relapses, no albuminuria, nor paralysis. No fatal case. The outbreak was thought to be due to bad drainage (cesspools).

Dr. Atkinson describes follicular tonsillitis as often epidemic, not infectious, never going to suppuration; generally accompanied by neuralgic pains and enlargement of lymphatics of the neck, unaccompanied by albuminuria, not followed by paralysis. He contrasts this with quinsy and diphtheria. He treats it by **Quinine** and **Iron**, lotion of **Boric Acid**, etc.

Dr. Farlow records five cases of a visible pulsating artery on the posterior wall of the pharynx, all in females aged respectively 4, 13, 18, 23, and 30. A case is reported by Baker, and we have seen others also. Ten cases of tempero-occipital headache, connected with affections of the pharynx and ear are reported by Legal ("Deutsch. Arch. f. Klin. Med.") The paroxysm of pain was severe and there was tenderness in the course of the great occipital and auriculo-temporal nerves.

Uvula.—Dr. Ethelbert Carroll Morgan read before the American Laryngological Society an exhaustive paper on hæmorrhage after uvulotomy, in which he gives a summary of the history of the operation from Celsus to 1886, with a most elaborate bibliography. He has collected 23 cases in which the hæmorrhage was obstinate; and for one case he met with he devised a clamp which completely controlled it. In one case recorded the hæmorrhage was fatal. In no case was the hæmorrhagic diathesis satisfactorily proved to be present.

PHTHISIS. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

Is phthisis infectious? In all varieties of phthisis Koch's tubercle bacillus has now been demonstrated to be the *fons et origo mali.* Enormous numbers of this bacillus are contained in the breath and sputum of consumptive patients, and this tuberculous sputum, after having been kept for months, has been found to be still capable of producing tuberculosis in animals in whom it has been inoculated. Considering the amount of dried sputum that must be present in the air of all thickly populated places, originating from the expectoration of numbers of consumptives, and the danger of infection to the healthy from the breath of phthisical individuals among large numbers of people assembled together, often in ill-ventilated theatres, halls, or churches, the inquiry as to whether phthisis is spread in the above, or in similar ways, naturally suggests itself. The investigations of Dr. C. T. Williams and others, however, have shown, that the disease is exceedingly rarely communicated in this manner, and in the large hospitals for phthisis, where numbers of consumptive patients are aggregated together, including the worst forms of the disease amongst them, infection of the other non-tubercular patients or of the attendants has not been known to take place; so that we may dismiss the notion that phthisis may be communicated by contagion as in the acute fevers. But under a combination of circumstances favourable to its development, in rare instances it has seemed to have been communicated from one person to another. Dr. Hermann

Weber has reported a few cases of infection from husband to wife. Very rarely instances of its communication have occurred where two individuals, one of them the subject of an active tuberculous process, have slept together in an ill-ventilated room. Infection may possibly take place through milk from a tuberculous cow. During the year Lehmann has reported three cases where a small greyish ulcer appeared on the prepuce of circumcised children; it was at first thought that syphilitic infection had taken place through a dirty knife, but a general infective process through the lymphatics followed, and the children died of tubercular meningitis. It subsequently transpired that the man, who, according to the Jewish rite, sucked the wound to stop the bleeding, was suffering from phthisis. Dr. Elsenberg reports a similar case where infection was conveyed from a man sucking the wound who had tubercular disease of the larynx. An instance from Reich where ten children of healthy family history died of tubercular meningitis, apparently produced by a consumptive midwife removing by aspiration the mucous products that obstruct the primæ viæ of newly-born infants, is quoted in Dr. C. T. William's work. This latter author states that in the whole course of his extensive experience he has never met with any well authenticated case of infective origin, except in a very few instances of husband and wife infection, or of members of a family sleeping together in an ill-ventilated bedroom, and says that all danger of infection can be easily obviated by the isolation of consumptive patients at night, by the adoption of proper hygienic measures, and by proper care in the selection of cows to supply milk.

That phthisis is markedly hereditary is well known; the proportion of all cases in which it has descended from parents to children varies in the different classes from 12 to 20 per cent, while about 45 per cent. of the patients have a strong family predisposition to the disease.

TREATMENT.—Prophylactic measures are most important in patients of phthisical heritage, and in early cases when the amount of mischief done is as yet small.

In the case of infants born of a consumptive mother, a wet nurse should be procured, and the mother not allowed to suckle her child at all. After a time the infant may be fed either on cow's milk, prepared in such a manner as to assimilate it as closely as possible to human milk in composition, or on asses' milk if it can be procured. Older children should have abundance of a nourishing diet, which at the same time should be simple and administered at regular intervals; milk forms an important element in it, and care should also be taken that plenty of

meat is eaten ; children will often take pounded, raw, or much underdone meat when they refuse it in other forms. The day and night nurseries should be large, airy, well-ventilated, with a sunny aspect. The children should be warmly clothed with flannel next the skin, and it is necessary to see that the lower part of the abdomen and the thighs are not left bare as is too frequently the case ; they should be clothed in flannel at night, so that if the bed clothes are thrown off, they will not take cold during sleep. Various gymnastic exercises, more especially those which have for their object the development and expansion of the chest, are useful, and exercise of all kinds if not too violent is to be encouraged, care being taken that at the conclusion of the game there is no standing about in cold air with insufficient covering. When the age for school arrives the hours should not be long, nor the work interfere with the due carrying out of hygienic measures, and the school rooms must be large, well warmed, and ventilated. It is obvious that the main object of our care should be to see that the child's health be established on as firm as possible a basis during the early years, and any loss of time as regards work will soon be regained afterwards, while the injudicious pushing on of studies in the case of delicate children too often leads to an outbreak of the disease in adolescence. During long cold winters the regular administration of **Cod Liver Oil** is attended with great advantage.

In the case of adults in whom the disease has just begun to show itself, or in whom its onset is feared the value of prophylactic measures cannot be over-rated. In the first place their houses should be on sand or gravel, and dry, and situated on high or sloping ground, so as to allow of free drainage, not surrounded by much vegetation, and away from all pools or slow running streams ; they must be well drained, and have for choice a southerly or south-westerly aspect. The bedroom occupied by the patient should be large, airy, warm, and well ventilated, and it is essential to see that he does not go from heated sitting rooms into a cold hall, passages, or bedroom. The clothing should be warm and light, with garments of flannel or lamb's wool next the skin all over the body, and a recent article in the " British Medical Journal " has called attention to the excellence of our home manufactures in articles of this kind. The meals should consist of an abundance of nourishing and easily digestible food, and should come at fairly frequent intervals. In the case of patients where the appetite is bad, and only a very small quantity can be taken at a time, a glass of milk, with the addition of a little rum, before rising, a cup of beef tea, or an egg in milk between breakfast and lunch, a glass of

milk or tea with much milk at five p.m., and gruel or beef tea at bed-time may be taken in addition to the regular meals. Milk is a most valuable article of dietary for phthisical patients, but should not be used as the drink at ordinary meal times, as it is then apt to take the place of other food which is quite as important. Dr. C. T. Williams says that not more than two pints per diem are to be allowed, and that one pint is enough when cod liver oil is being taken. Of koumiss the same authority says that it has no specific influence on phthisis, but is a valuable substitute for milk, and is often retained when all other food excites vomiting. Stimulants in moderate quantity are desirable. The patients must remain indoors on damp, cold days, but whenever the weather at all permits a certain amount of exercise, riding, walking, etc., is to be insisted on, and in fine weather they should be as much as possible in the open air. Gymnastics are useful, especially as affording a means of taking exercise in bad weather.

The sputum must be received into special receptacles containing a strong disinfectant, and these are to be washed out and scalded with boiling water every day.

Where the patient's means permit, the greatest advantage is obtained by absence from England during the winter and spring months in suitable cases, and residence for this period of the year in warmer climates. The treatment of phthisis by residence at mountain stations at a high altitude has given most satisfactory results, but the cases must be carefully selected; those most benefited are perhaps patients with strong hereditary pre-disposition to the disease, those in an early stage, or chronic tubercular cases, where there is no fever, and where the morbid process has not destroyed a great extent of breathing surface. Space will not, however, permit me to enter into the details that must be considered in selecting suitable cases, and the particular places or sea voyages likely to be beneficial to each, and I must refer the reader to Dr. C. T. Williams' work on Phthisis, to "The Ocean as a health resort," to Dr. Douglas Powell on "Diseases of the lungs and pleuræ," and to Vintras, "On the Watering places of France," and to papers by various authors in the Medical Journals, from which full information may be obtained.

Therapeutic Measures.—The past year has been remarkable for the number of so-called cures of phthisis brought forward, the confidence with which invariable success has been claimed for each, and the rapidity with which most of them seem destined to pass again into oblivion.

First, hypodermic injections of **Eucalyptol**—to the amount of ℥ss

per diem—in liquid vaseline, have been advocated; the value of the procedure is still perhaps uncertain, and the latest experience is unfavourable. The most reliable data are those of MM. Bouveret and Péchadre, of Lyons, who carried out the treatment in 16 cases, and concluded that (1,) it had no specific effect on tuberculosis; (2,) it is useless and even dangerous in febrile cases; (3,) it is a form of balsam treatment of good effect only in cases attended with much bronchitis, in which equal relief can be afforded by more satisfactory means.

Injections of **Iodoform** or **Eucalyptus** into cavities or tubercular consolidation in the lungs themselves, introduced by Dr. Shingleton Smith some 18 months ago, have yielded no satisfactory results in the past year. In one case, among others, reported by Dr. Ransome, of Manchester, the iodoform appeared to have been directly injected into the blood, and produced most alarming symptoms. The difficulty of injecting a sufficient quantity to thoroughly disinfect the lung renders this mode of treatment unlikely to produce satisfactory results, at any rate till we have attained better modes of procedure.

Dr. Bougeon, of Lyons, stated that he had obtained most successful results in phthisis by injections into the rectum of gaseous enemata, consisting of **Sulphuretted Hydrogen** and **Carbonic Acid** gases. He affirmed that this mode of treatment uniformly resulted in cure or in advanced cases in an amount of relief not to be attained by other means, and that it produced no ill consequences. The H_2S is eliminated by the lungs, and he considered the benefit to arise from the antiseptic properties of the gas. This invention was at once taken up and carried out in numerous hospitals, the first reports were encouraging, but none of the experimenters found their success to approach that claimed by the inventor, and the latest reports on this plan of treatment state that it is of little value. The patients often have much repugnance to it, and it seems certain that it will never come into general use, even if it receive more extended trial. Dr. H. C. Wood considers that equal benefit is to be anticipated from H_2S given in solution by the stomach, and points out that any supposed antiseptic properties of the gas can have no influence on the tubercle bacillus, since cultures of this organism can be carried on in it with success; the proportion also of H_2S, to be obtained from the "Eaux Bonnes," which were used by Dr. Bougeon in carrying out this treament, is infinitesimal. The many trials of this plan now published justify us in concluding that it is not a specific in tubercular disease, that it is attended with little benefit, and this, when obtained, consists chiefly in diminution of expectoration, and that it is by no means altogether harmless, as

toxic symptoms, nausea, vomiting, collapse, diarrhœa, and headache have followed its use. Those who wish to carry out the treatment will find all information, as to apparatus and mode of preparing the gases, etc., in a paper by Dr. Burney Yeo in the "Lancet," April 16, 1887.

The bacillary origin of the disease now being established, the objects of treatment are first to find remedies that will destroy the bacillus, if possible, and secondly, if this cannot be accomplished, to raise the vitality or otherwise modify the tissues so that they will no longer afford a suitable soil for it. Treatment by antiseptics has these aims in view, more especially the first, while by general measures and the use of cod liver oil and tonics we try to accomplish the second indication. Fräntzel warmly recommends **Creasote** in fairly large doses, and claims that it gradually cures the cough and expectoration, while the patients gain flesh, strength, and appetite. In late stages of the disease the drug does not seem to be of much benefit. **Iodoform** (in doses of 1 to 5 grs. ter in die) in pill or oil has now received further trial, and although in some cases it seems to do good, yet after extended trial we have found that it is not so successful as at first it seemed likely to be. **Iodol** has the advantages of not giving rise to the digestive disturbances, and of not having the tendency to repeat that prevents many patients from taking iodoform. **Phenyl-Acetic, Phenyl-Propionic Acids**, and **Sulpho-Carbolate of Soda**, in doses 5 to 10 grs. seem to promise better results, and afford the best means of getting **Carbolic Acid** into the system. It has been shown that a 15 per cent. solution of the latter prevents the growth of the bacilli. These medicines are not disagreeable to take. In one boy, 5 grains, three times a day, gave the characteristic change of colour in the urine of carbolic acid, with general improvement. **Pure Terebene** is most valuable, both as an antiseptic and for the relief it very often gives to cough and dyspnœa, affording an excellent substitute for cough mixtures: it may be given in the cod liver oil, or alone, in water or on sugar.

Inhalations of cultivations of bacterium termo, given on the supposition that this micro-organism destroys the tubercle bacilli when both exist together, have been tried again this year with the same bad result as before, and may be mentioned only to be condemned.

Professor Dujardin-Beaumetz has carried out lately with good results so far—the bacilli disappearing from the sputum—inhalations of **Sulphurous Acid.** In a closed room 20 grammes of sulphur to the cubic metre are burnt, and the patient placed in the room twelve hours afterwards; he stays there about eight hours.

When there is much pyrexia the use of antipyretics may be combined with antiseptic treatment. **Antipyrin** is perhaps the best, in doses of 15 grains three times a day, or more often if necessary, then **Quinine**, the **Salicylates**, and **Antifebrin**. The latter is given in doses of 3 to 5 grs., its action comes on more slowly, but lasts longer than antipyrin, it however sometimes gives rise to cyanosis and very profuse sweats, which antipyrin does not. The salicylates cannot, of course, be continued for long in full doses, on account of the unpleasant effects produced. **Thallin** and **Kairin** are harmful.

As to general treatment, **Cod Liver Oil** takes the first place, it should be administered immediately after meals, and may be given in wine or black coffee. Another useful mode of administration is the late Dr. Williams' plan of giving the oil floated out on the surface of an acid and bitter tonic mixture. Dr. Douglas Powell says that a few grains of **Pulv. Pancreaticus** (Benger) sprinkled on the oil, often prevent its repeating. Care must be taken that the appetite is maintained whilst the oil is being taken, and the amount of fats in the ood should be slightly diminished. One may begin with ℥j to ℥ij twice daily, and gradually increase the quantity. If the patient takes it well, ℥iij, or even ℥iv, may be given in the 24 hours with excellent results. When cod liver oil cannot be taken in the ordinary form, emulsions are useful, such as Scott's and Kepler's solution with malt.

Maltine is recommended by many physicians, but is not to be compared to cod liver oil in results. The dilute **Mineral Acids, Phosphoric Acid** and **Strychnine** are the most useful tonics. **Arsenic** besides being an excellent general tonic, diminishes slight pyrexia, and night sweats ; it aids the fatty degeneration of effete products of consolidation, and so hastens their removal. The **Hypophosphites of Lime** have much the same action, and small doses of **Iodide of Potassium** may be advantageously combined with them or with **Arsenic** in cases where there is much consolidation. **Iron, Quinine,** the **Phosphates** are all of service in different cases.

Symptomatic Treatment—Night Sweats.—**Oxide of Zinc**, 2 to 5 grs. in pill at bedtime, is generally effectual ; or a full dose of a mixture containing one of the mineral acids. **Arsenic**, as mentioned above, **Strychnine, Quinine, Belladonna** ¼ to ⅓ gr. of extract, **Liq. Atropine** 1 to 4 min., and **Picotoxin** are all useful. **Belladonna** and **Atropia** if long continued are inconvenient from their tendency to produce their physiological effects. Dr. Wm. Murrell recommends small doses of Dover's powder at bedtime as the best remedy. Dr. Rebory, in his Thèse de Paris, has found that the **Phosphate of Lime**

is the most efficient remedy, and its administration is attended by no drawbacks.

Cough.—The cough of phthisical patients often requires to be encouraged, especially where there is much secretion from the bronchi, and the cough is loose and feeble. Expectorants such as **Ipecacuanha** and **Ammonia** are then useful, given in saline mixture at the beginning of the illness or the onset of any fresh inflammatory attack. As a rule, because they tend to take away the appetite, on the maintenance of which so much depends, cough mixtures are to be avoided in phthisis. If, however, the cough is hard and frequent, preventing sleep, a dose of a linctus containing **Morphia** or **Opium** with **Hydrocyanic Acid** or **Bromide** may be given at night. **Belladonna** and **Stramonium** are useful in spasmodic cough. Only in cases of great necessity are cough mixtures to be allowed by day. Pure **Terebene** is of much service, especially when there is dyspnœa; and when the breath is offensive, one of the dry inhalations, by means of Dr. Coghill's respirator, containing **Creasote, Iodine, Carbolic Acid, Eucalyptus,** etc., is serviceable. These inhalations, with an addition of a few drops of **Chloroform** are often of the greatest value in subduing harassing cough.

Hæmoptysis. — **Gallic** and **Tannic Acids,** alone or in combination; liquid extract of **Ergot, Tincture of Hamamelis; Acetate of Lead, Oil of Turpentine,** with counter-irritation, by means of a blister, may any of them be tried, the patient, of course, being kept absolutely quiet in bed in a cool room. In severe cases, Dr. C. T. Williams thinks the injection of tannic acid into the lung itself, as in a case of his own, may prove useful.

PITYRIASIS RUBRA. *N. Whitelaw Bourns, M.D.*

Dr. Hardaway reports a case, which, in addition to the ordinary symptoms of exfoliative dermatitis, presented for a week or ten days a well-marked bullous eruption, appearing in crops. Each crop was preceded by a chill, with slight elevation of temperature, without any regularity in their appearance. The anomalous eruption soon disappeared, and the case, while under observation, presented the usual symptoms of pityriasis rubra. ("Journ. of Cut. and Ven. Dis.," Nov., 1886).

Devergie has recorded cases in which he says "Pityriasis has become transformed into pemphigus."

McCall Anderson speaks of having seen cases, at first presenting all the features of psoriasis, and later, possessing the typical characteristics of pityriasis rubra.

TREATMENT.—The affection is a rebellious one, and no one line of treatment can be confidently recommended. **Arsenic** in large doses, and long continued, will be found to give the best results.

PITYRIASIS VERSICOLAR. (See "Tinea Versicolor.")

PLEURISY. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

A patient suffering from an acute attack of pleurisy is to be kept in bed in a warm room. No very active measures are necessary. The diet, whilst there is fever, should consist of fluid food, and after subsidence of fever should be light and nutritious. If there be severe pain in the side, a hypodermic injection of **Morphia** may be given, and the side fixed by broad bands of strapping, passing from the spines of the vertebræ behind to mid-sternum, round the affected side, in order to maintain the inflamed surfaces in a state of rest. A saline mixture or **Aconite** may be given internally; and Dr. Lauder Brunton recommends the use of **Tincture Bryonia** ℥ij to v., with a view to prevent effusion.

When effusion occurs, provided that it is not excessive in amount, *i.e.*, does not reach above the third rib, nor unduly bulge out the affected side, no active measures for its removal are needed for from ten to fourteen days. When the patient is strong and robust I have seen the effusion rapidly absorbed under the plan of treatment proposed, I believe, originally by Sir William Gull, namely, to cut off so far as possible all fluids from the patient's dietary, and at the same time to administer saline purgatives. **Sulphate of Soda** is the best for this purpose, and may be administered in doses of ʒss, three times or more in the 24 hours. It produces copious watery evacuations without pain or discomfort to the patient. A mixture of **Potass. Acetatis** gr. x. with infusion of **Digitalis** ʒij. t. d. is recommended by some physicians. **Iron, Bark,** and other tonics, are of service in the effusion-stage, and **Iodide of Potassium** appears sometimes to successfully promote absorption. **Pilocarpine** has been used for the same purpose.

Should the effusion be excessive in quantity, extending to the second rib, or higher, with evidence of interference with the heart's action from pressure; or should it show no tendency to undergo absorption after a fortnight, it should be at once removed by aspiration. It is advisable not to remove the whole quantity of the fluid. The puncture is preferably to be made in the left side in the sixth space about, or a little in front of the mid-axillary line; on the right side the fifth space may be selected. Re-accumulation of the fluid, may, after an interval, require the aspiration to be repeated. Finally it must be remembered

that sudden death occurs occasionally in pleurisy quite unexpectedly. Weill points out that death very often occurs when the patient appears to be making most satisfactory progress, and that it is usually brought about by a sudden effort, thus emphasizing the importance of absolute rest in cases of pleuritic effusion. Contrary to expectation, he finds that the effusion is most often on the right side in these cases ; it is generally serous, and may be in any stage of advancement or retrogression. He is inclined to reject the mechanical theories hitherto advanced as the causes of sudden death, and to attribute it to thrombosis or embolism of the heart or pulmonary artery, to sudden œdema of the lung on the unaffected side, or to disease of the myocardium.

PNEUMONIA. *J. Michell Clarke, M.A., M.B., M.R.C.P.*

Is pneumonia due to a specific micro-organism ?

Weichselbaum describes four varieties present : (1,) Diplococcus ; (2,) Streptococcus pneumoniæ ; (3,) Staphylococcus aureus and albus ; (4,) Bacillus pneumoniæ of Friedländer. Of these the first and fourth only are of importance, and the first occurs by far the most often. Fränkel has discovered that they exist also in healthy sputum, and in the nasal secretions in rhinitis, ozæna and acute coryza. Inoculations of the diplococcus, when successful, produce in the inoculated animal septicæmia of the same kind as that produced by inoculations of sputum from healthy persons or those suffering from other diseases than pneumonia. All that can be said is that the sputum from pneumonia cases gives rise to septicæmia when inoculated, very much more frequently than healthy sputum. So far it appears more probable that the pneumonic consolidation brought on in some way by cold, damp, over-fatigue, exposure or excess, affords a suitable soil for the micro-organisms, already present in the secretions of some parts of the respiratory passages, to grow and develop in, and that they constantly accompany, rather than cause pneumonia, since all inoculation experiments, with one doubtful exception, have failed to produce pneumonia, merely giving rise to septicæmia. The micro-organisms, mentioned above, are found in all varieties of pneumonia.

Is pneumonia infectious ?

That it may occur in epidemics is now well known ; and the histories of two such epidemics occurring last year are recorded by Dr. Adam and Mr. Foulis. Lancereaux and Besançon bring forward the most striking instance, that of six cases that originated in a ward in the Paris hospital de la Pitiè. The ward had been occupied by a number of pneumonia patients from outside during the preceding month. All

six had the same kind of attack, which presented some peculiar features, and all died. Perhaps it is inevitable that an epidemic outbreak of this kind should strongly suggest the possibility of an infectious process taking place, because the history of such an epidemic and of that of an outbreak of an infectious fever, presents many surface resemblances. But in all cases in which pneumonia has occurred in this way, the patients have been exposed to a common cause or causes, often whilst depressed in health from previous disease or insanitary surroundings; and there is no authenticated instance in which all other causes that might affect the sufferers in common could be excluded, and the illness definitely traced from one person to the other. We may with more reason suppose that when pneumonia occurs epidemically, certain causes, that as a rule rarely occur together, are now acting in concert, and that in this combination they exercise far greater virulence in causing pneumonia than when occurring singly. I may allude to some meteorological researches during the past year as throwing light on this point. These show that humidity of atmosphere, low temperature, a falling temperature, or strong wind, are each accompanied by an increase of pneumonia; that when any two of these occur together there is a further rise in the number of cases, and that when three, or all, are in concert, this rise becomes very marked.

TREATMENT.—During the early stage **Aconite** is supposed by some to favourably modify the course of the disease, but at this time we can only conjecture the cause of the fever, and the action of aconite in depressing the strength of the heart and tonicity of the vessels on maintaining which, in the latter stages so much depends, must certainly be disadvantageous.

As to the use of **Quinine** the most recent researches seem to show that in full doses it exercises no influence on the course of the disease, the morbid process still advancing in the affected or extending to the sound lung even whilst the patient was fully under its influence, while the gastric, cardio-vascular, and nervous disturbances produced are great objections to its use.

In a discussion at the New York Academy of Medicine, a large majority of the members held that it was useless in small, and injurious in large doses. In the pneumonia of children, however, moderate doses are useful unless it excites distaste for food, vomiting or nausea, while in patches of broncho-pneumonia, where resolution is delayed, and in convalescence, **Quinine** is of the greatest value.

Belladonna, Ergot, Digitalis, Pilocarpine, Nitrite of Amyl, and many other drugs have been used with the object of cutting short

the attack; but it must be remembered, before giving the credit to the particular drug administered, that in many cases of pneumonia the crisis occurs after two or three days instead of running on from seven to eight, and it is probable that there is no known remedy capable of aborting the attack. The results of the expectant treatment of pneumonia, considering the severe nature of the disease, leave little to be desired. When the temperature remains very high the best antipyretic measures are tepid sponging, the use of **Quinine** in doses of 10 grains two or three times daily, or **Salicylate of Soda** in 20 grain doses; the latter remedy being contra-indicated if the action of the heart be at all feeble. The mode of action in reducing the temperature of **Thallin, Antipyrin,** and **Antifebrin,** renders their use in pneumonia inadmissible.

Dr. Ringer and other authors recommend **Tartar Emetic** in the early stage, in small doses not exceeding $\frac{1}{16}$ to $\frac{1}{4}$ grain, care being taken to avoid its depressing effects. This is a revival of the old practice in which tartar emetic was prescribed as a matter of routine in cases of pneumonia. On the few occasions we have seen it given, its effect, even in the above small doses, was to cause such great depression that it had to be discontinued. It is good practice to commence treatment with the administration of **Liq. Ammon. Acetatis** and **Citrate of Potash,** with or without a saline purge, according to circumstances, to procure free elimination by the skin, bowels and kidneys. As a rule stimulants are not necessary at this time, but when in cases of a low type delirium occurs with weak, feeble pulse, high fever and great prostration, **Carbonate of Ammonia** alternately with **Alcohol** should be at once administered. In some cases of this kind of a septic nature, **Tincture of Iron** in 20 drop doses is valuable.

During the stage of consolidation the great danger is failure of the heart's action, and **Alcohol,** as judged by the state of the pulse, will often be found necessary. **Carbonate of Ammonia** in effervescing mixture is very useful. Dr. Douglas Powell recommends **Tincture of Digitalis** (5 to 10 minims) when the heart's action is feeble, combined in some cases with **Iron** and **Acetate of Ammonia.**

The patient is apt to suffer at the period of crisis from shock and exhaustion from the rapid fall of temperature, and his recuperative powers are enfeebled by the preceding illness. Should there be want of re-action at this time, the amount of alcoholic stimulant must be temporarily increased to tide him over the dangers, which chiefly arise from tendency to heart-failure and pulmonary œdema. During the two or three days following crisis the cough is generally increased, and at this time a mixture containing **Ammonia, Ipecacuanha** and **Tolu,**

with **Iodide of Potash** will be found serviceable in aiding expectoration and soothing cough. Stimulants are now cautiously lessened in amount, and the diet gradually improved by the addition of solids, and the state of the kidneys and bowels must be carefully looked to. In aiding resolution and the removal of the effete products, the **Iodides** and **Arsenic** are undoubtedly of great value. **Quinine**, the **Mineral Acids** and **Iron** aid and hasten convalescence. During the course of the illness the patient must be kept in a warm room, at rest in bed, and poultices applied to the affected side or the chest well packed in cotton wool.

When the illness unfortunately terminates in purulent infiltration of the lung, little can be done besides maintaining the patient's strength with **Alcohol, Bark,** and **Ammonia.** It is in these cases of septic type that **Quinine** finds its chief application. In the rare cases when the expectoration becomes fetid and distinctly gangrenous, Dr. Douglas Powell recommends **Eucalyptus,** 10 drops with an equal part of spirit to be inhaled from a respirator for thirty minutes every two or three hours. The air of the room may also be charged with eucalyptus vapour by floating a teaspoonful of the oil on the surface of a basin of hot water placed at the bedside.

PNEUMONIA (Lobular or Broncho).

J. Michell Clarke, M.A., M.B., M.R.C.P.

This affection is almost confined to children, and occurs with greater proportionate frequency in those under three years of age. It is generally secondary to previously existing catarrh of the bronchi, and is a common sequela to measles and whooping cough. This disease rapidly depresses the patient's strength; and in rachitic children especially often leads to a fatal termination. Stimulants are therefore to be given early, and administered freely, according to the requirements of the case, in the form of brandy, or of the brandy and egg mixture of the Pharmacopœia. If the pyrexia is excessive it may be reduced by tepid bathing, or the administration of **Quinine** or of **Antipyrin,** the latter in small doses. As a rule attempts to reduce the temperature are to be accompanied by the administration of stimulants. An emetic is often useful in the initial stage, but is not to be repeated. Counter-irritation of the skin of the chest by mustard, or mustard and linseed-meal poultices is valuable; it may be continued till some blistering of the skin is produced, and the chest then wrapped up in cotton wool. The diet should consist of milk with lime water or barley-water, of strong beef-tea, or meat essence; and in the case of infants, or very young children, the addition of Benger's

or Mellin's food to the milk is desirable. As to drugs, **Sal Volatile, Ipecacuanha,** with **Alkalies** may be given, followed later on by a more stimulating expectorant mixture. It is in these cases of pneumonia that **Quinine** in moderate doses is especially serviceable. **Iodide of Potassium** has been lately warmly recommended; it is to be administered in full doses, but should not be given to weakly children. When the disease runs a very subacute course, Dr. Eustace Smith recommends **Tinct. Ferri Perchloridi,** in ♏x doses every three hours for a child five or six years old.

When the pyrexia subsides, **Quinine, Iron,** or other tonics, with **Cod-Liver Oil** should be given; and **Arsenic** and **Iodide of Potassium** aid resolution, if this is tardy.

PREGNANCY (Diseases of). *W. R. Dakin, M.D. B.S.*

A new sign of Pregnancy, first described by Hegar, has since been investigated by Compes, who has a high opinion of its value for diagnosis. It consists in a softening of the lower segment of the uterus, most marked in the median line, where it contrasts strongly with the dense cervix. It was only absent in one case he examined.

In a case at the fifth month, the uterine wall at the spot mentioned was so soft and lax that it could be pinched up between the thumb and finger.

The thumb is introduced per vaginam as far as the cervix, and the index finger per rectum till it is past the sacro-uterine ligaments (level at which cervix joins lower uterine segment). The uterus is pressed down by the other hand, so that nearly all its surface can be investigated. The softening described is said to occur in only one other condition, namely retroversion of the uterus.

Extra-uterine fœtation.—The treatment of this abnormality depends on the period at which it is first recognised. In any case it should be dealt with as soon as possible after a diagnosis has been made. Up to the end of the fourth month, electricity to destroy the life of the ovum, much recommended by American physicians (Thomas, Garrigues), is probably the best means, after that time laparotomy.

The question of the best method of using **Electricity** is still undecided.

Dr. Garrigues of New York has published nine successful cases where *galvano-puncture* was employed. Other cases have occurred, as that of Aveling (B.M.J., December, 1886), when the *faradic* current was employed for ten minutes each time on four consecutive days, and the tumour lessened and finally almost disappeared. This latter method is not always successful, but is less dangerous than the former,

which has a most powerful electrolytic effect in the ovum and tissues, at least in the strength hitherto employed.

Dr. Petch publishes a successful case where he used galvano-puncture to destroy a five-months fœtus. Three days after an application lasting an hour of a current from a Leclanche battery of 30 cells, the fœtus died. Twelve months after the tumour was the size of a cocoanut, in three years it had disappeared.

Dr. Percy Boulton used the same number of cells in a tubal fœtation. He introduced three curved insulated needles per vaginam into the tumour and connected then with the positive pole. The negative rheophore was a flat sponge applied to the left thigh for six minutes only. He thinks the ovum was killed and suppurated, then bursting into the peritoneum; but unfortunately the specimen was destroyed and so no evidence was forthcoming.

In cases where laparotomy is performed, and these will be cases of the abdominal variety, as much of the ovum should be removed as possible. The placenta, unless its removal is very easy, will have to be left behind, and the cavity must be drained through the abdominal wound. (See Electricity.)

In commenting on the case of Dr. Petch, Dr. Berry Hart remarks that (1,) The placenta may grow after the fœtus is dead. (2,) Manipulations of the uterus, such as passing a sound, &c., are liable to cause rupture of the sac. (3,) The dead fœtus may not be absorbed. (4,) Diagnosis is doubtful in some cases.

In cases of *ruptured cyst* in extra-uterine fœtation the abdomen has been opened, the peritoneum cleansed and the hæmorrhage arrested with the greatest success, and this is the only correct treatment, to be carried out immediately.

Albuminuria of Pregnancy.—(See Labour, Eclampsia.)

PRURIGO. *N. Whitelaw Bourns, M.D.*

In a very aggravated case of prurigo, in which the symptoms were so exaggerated that ointments gave no relief, Pick obtained the best results by covering the part with **Glycerine Gelatine.** The application may remain in place for many days, and when deficient at any particular point may be renewed. In this case, by means of this application the man was able to live out of the hospital, and follow his usual employment. ("Monatsh. für Prakt. Derm.," 1887, No. 8.)

PRURITUS. *N. Whitelaw Bourns, M.D.*

Dr. Hardaway ("Journ. of Cutaneous and Veneral Diseases") has in generalised pruritus had good results from spraying a lotion of the following sort: **Carbolic Acid** (3 to 4 drachms), **Glycerine** (1

ounce), and water, a pint. After the bottle of the atomiser has been filled, he sometimes directs the patient to add from 5 to 10 drops of oil of peppermint. The atomiser bottle should be thoroughly shaken before the bulb is compressed, in order to diffuse the peppermint through the mixture, as otherwise it would merely float on the top. In many instances the spray is far superior to mopping on lotions with a sponge or rag, being neater and less troublesome, getting the remedy more evenly and uniformly applied over the surface, and usually giving more speedy relief. ("Med. Record," April 15th, p. 162.)

Dr. Bulkley gives 10 minim doses of the **Tincture of Gelsemium,** to be repeated in half-an-hour, and the dose increased if necessary, until a drachm is taken in the space of a couple of hours; locally he uses a **Lotion of Bismuth** and **Hydrocyanic Acid.** ("Diseases of the Skin.")

The fluid **Extract of Conium** brushed over the part is well spoken of by Dr. Satterlee.

Sir Dyce Duckworth uses **Boroglyceride** one part to two of water.

Painting the part with **Oil of Peppermint** frequently affords immediate relief.

Pick recommended **Pilocarpin** by the mouth or hypodermically, in doses from an eighth to a sixth of a grain.

Bromide of Potassium and **Chloral** may be called for when sleep is very much interfered with.

PRURITUS VULVÆ ET ANI *John W. Taylor, F.R.C.S.*

With its frequently associated eczema, may be advantageously divided into the following varieties:—

(1,) Strumous
(2,) Parasitic
(3,) Congestive
(4,) Diabetic
(5,) Neurotic

(1,) The *strumous* variety is chiefly met with in young children, and is to be cured by astringent injections (**Zinci Sulph.** ℥ss, **Aluminis** ℥iss ft. pulv. S. One teaspoonful to be dissolved in a pint of hot water and used as directed) and by the internal administration of **Cod Liver Oil.** The injection must be carried by a fine syringe or douche *within* the vagina.

(2,) *Parasitic* forms may be due to pediculi, ascarides, and possibly to pityriasis versicolor. **Ung. Hydrargyri** for pediculi, and as a ring round the anus for ascarides, and **Ung. Potassæ Sulphuratæ,** B.P. for other forms will speedily affect a cure.

(3,) The *congestive* variety in women is usually due to *pregnancy*, and is often most troublesome from the third to the seventh month of gestation. The whole vulva is of a dusky purple colour from venous congestion, the skin and mucous membrane is often abraded, or the seat of an eczematous eruption which discharges freely, while a copious viscid uterine leucorrhœa, almost constantly passing, appears to irritate the already inflamed vaginal outlet and intensifies the suffering. When the condition is as here described, the patient should be kept in *bed* for a time, **Hot Borax Lotions** (℥ij ad. Aq. Oj as hot as can be borne) should be used freely to the vulva, and the bowels should be well opened with *saline* or other **Purgatives**. The vagina and vulva may be kept free from the uterine discharge by the insertion of a **Boracic Acid** or **Iodoform Wool Pad** against the os every other day, the one pad being withdrawn and the vagina gently cleaned out a short time before the introduction of a fresh one. In severe cases great and sometimes lasting benefit is obtained by painting the whole vulva with a solution of **Nitrate of Silver** in **Spirit Eth. Nit.** (gr. xv ad. ℥j).

Minor degrees of this variety are associated with piles and due to hepatic disorder. The treatment is that indicated under "Hæmorrhoids" together with hot borax lotions and **Ung. Potassæ Sulphuratæ** for the pruritus.

(4,) The *diabetic* variety is generally met with about the period of the menopause. The flow of urine is usually excessive and the parts are rarely dry and the vulva is *sodden* and inflamed. The **Hot Borax Lotion** still affords the most grateful means of relief, but after every application of the lotion, the parts should be padded perfectly dry and thoroughly anointed with **Boracic Ointment.** The **Ung. Potassæ Sulphuratæ**, when it can be borne, also frequently affords signal benefit, possibly by arresting the fermentative and other changes which may occur in the saccharine urine that unavoidably moistens the vulva.

Internal treatment is of course necessary in this variety. **Sodæ Salicylat.** (grs. x t.d.s.) and **Tinct. Opii** (♏j to iv t.d.s.) being the most useful remedies at our command.

(5,) The *neurotic* variety comprises all those cases which cannot be included in the preceding groups, and in which no definite cause can be found beyond what is involved in the daily or more frequently recurring pruritic paroxysm. In these cases the symptoms have often lasted for years. The skin in the neighbourhood of the vulva is *thick*, *dry*, and *coarse*, and there is usually no eruption other than that which is directly produced by scratching.

Ol. Menth. Pip. as recommended by Dr. Wilde in the "Annual" for 1887, is invaluable as a local application in this condition. Many patients, however, find it too strong when undiluted, a painful red papular eruption being produced by it. I have found the following formula answer well :

℞ Ol. Menth. Pip. ℥ss | Ol. Olivæ ℥iss
M.ft. S. To be painted on the parts every day.

In addition to the remedies already mentioned, **Icthyol** (10 per cent.) and **Ung. Cocainæ** c **Lanolin** (5 per cent.) have been specially recommended during the past year. In rebellious cases Mr. Mitchell Banks has advised the use of the thermo-cautery. The cautery at a white heat is to be lightly passed over the affected surface so as to cause a superficial burn. This is to be subsequently dressed with lint kept moist by a solution of **Carbonate of Soda.**

NOTE.—While classification is a decided help to ready and successful treatment, it may be well to remark that the best remedies for pruritus have an action altogether beyond the limits which such classification might appear to define—this is notably the case with **Borax** and the **Sulphides**—one of the best remedies for the pruritus of jaundice being a **Sulphide of Potassium** bath.

PSORIASIS.

N. Whitelaw Bourns, M.D.

Beissel makes the statement, that in microscopic examination of the scrapings of the part immediately overlying the papillary layer of the skin in psoriasis patches, he has found a fungus apparently corresponding to that to which Lang has called attention. Experimental inoculation with this fungus (obtained by culture) produced an intense hyperæmia at the points of inoculation, which, after a day or two, began to fade ; there then formed a small reddish areola immediately round the inoculated part, on which a distinct, well-marked scaling was noted to occur. Such lesions remained for several weeks, and then, after repeated soap-washings, disappeared. The author believes, therefore, that this fungus is an important etiological factor in this disease. ("Monatsh. fur Prak. Derm." No. 9, 1886.)

Pecirka finds that in psoriasis the stratum corneum does not form a homogeneous non-nucleated layer ; flat, well-stained nuclei being found in it. The stratum lucidum and stratum granulosum are preserved, the latter being in some places represented by one or two rows of cells. From these and other histological details, he concludes that psoriasis is a disease of an epithelial structure of the skin, and that it consists probably in an atypical and irregular cornification of

the epithelium, although the changes in the vessels are of a secondary nature. (" Montash. für Prakt. Derm.," vol. vi., No. 2.)

The prognosis in psoriasis is not favourable, except in very mild cases, as the disease is a rebellious one, and frequent relapses are to be dreaded.

The treatment must be both constitutional and local, and the greatest care taken to improve the general health of the patient, by suitable food, exercise, and general medication. **Arsenic** is the drug most frequently given internally, and when judiciously prescribed and persevered with, satisfactory results will in most cases follow.

Duhring speaks highly of the **Liquor Potassii Arsenitis**, and gives the following formula :—

℞ Liq. Potassii Arsenitis ℥iss | Vini Ferri ℥iv
M. One teaspoonful, with a wine-glassful of water three times daily, directly after meals.

(" Diseases of the Skin," p. 314.)

In obstinate cases McCall Anderson advises the subcutaneous injection of **Liq. Sodæ Arsenitis**, beginning with 10 minims daily, and if the drug is found to agree, the quantity may be gradually increased to 20 minims in the twenty-four hours. The injection to be made in the buttock, the skin being previously frozen. (" Diseases of the Skin," p. 332.)

Dr. Shoemaker, when speaking of rectal alimentation and medication in diseases of the skin, at the international Medical Congress at Washington, says **Arsenic** and **Antimony** are of incalculable value in psoriasis, but owing to stomach derangement they not infrequently have to be discontinued, he therefore recommends suppositories containing $\frac{1}{20}$ of a grain of **Arsenious Acid**, or **Arsenite of Sodium** in each, to be used from one to five in the day, care being taken that the drug is divided throughout the mass.

Bulkley says in gouty subjects **Alkalies** must be given with a free hand, while at the same time, or later, **Arsenic, Strychnine,** or other tonics are frequently called for.

Amongst the remedies which have been tried with some success in obstinate cases, are **Carbolic Acid, Phosphorus, Tar,** and **Copaiba.** McCall Anderson has had good results from the use of **Cod Liver Oil,** and from large doses of **Carbonate of Ammonia,** 10 to 40 grains largely diluted with water.

The local treatment of psoriasis we look upon as a matter of great importance, not so much from the drug employed, as from the mode of application, as in many cases the disease rapidly disappears without

internal treatment, when the parts are thoroughly bathed in plain or alkaline baths night and morning, followed by brisk friction for several minutes, with a rough towel.

If the parts are inflamed a soothing application must first be employed, as the **Oleate of Zinc, Cold Cream,** or **Olive Oil,** followed by the use of stimulating ointments. McCall Anderson uses the following :—

℞ Acidi Chrysophanici	gr. x	Lanolini Purissimi	
Adipis Præparatæ	ʒj	(Liebreich) ad	ʒj

Or as recommended by Jarisch, an ointment of **Pyrogallic Acid,** 1 drachm in an ounce of **Lanolin;** the absorption of the drug may give rise to unpleasant symptoms, as diarrhœa, vomiting, fever, prostration and strangury, and even death has been known to follow, therefore it must be used with some care, and to a limited area.

Cold water packing, when a limb, or even the whole body is involved, is often followed by the best results. The patient being enveloped in a wet sheet, must be wrapped round with blankets, and sweating encouraged by copious draughts of water. After about two hours the process is completed by the patient jumping into a cold plunge bath, being rubbed dry with a rough turkish towel, and sent for a brisk walk or other active exercise.

An ointment of **Tar, Creasote, Mercury,** (ammoniati, or oxidi rubri) **Carbolic Acid,** or a solution of **Sulphuret of Calcium** may frequently be employed with advantage.

PUERPERAL STATE (Diseases of). *W. R. Dakin, M.D., B.S.*

Septicæmic Conditions.—Causes, the blood and tissues of a lying-in woman are overcharged with waste products ; and, given inadequate eliminating organs and the presence of contagion, we have all that is necessary for the production of pyrexia.

This, shortly, may be of two kinds—(1,) Simple septic intoxication (sapræmia). (2,) Either some form of true septicæmia, or one of the zymotic diseases. The former disappears with the removal of its cause ; the latter, once established, has to be left to a great extent to do its worst, support of the patient and the treating of pyrexia being all that is possible, (a look-out being kept for surgical opportunities). If true septicæmia, it follows the course of the ordinary surgical form, and differs from it in no respect. Scarlatina and erysipelas are the two zymotic diseases which are most dangerous to puerperal women. They appear in the patient either in their own character, or, as is believed by some of the best authorities, in a disguised condition. Thus a puerperal fever in the mother has given

erysipelas of the navel to the child ; and a man has died of erysipelas of the penis and abdomen after having connection with his wife who was suffering from puerperal pyrexia. Scarlatina, it is believed, may affect lying-in women in such a way that the stress of the disease falls on the pelvic organs to an infinitely greater degree than on the skin or throat, and signs of the disease in these latter may be wanting. All cases of puerperal septicæmia, whatever their source, cause similar disease in other puerperæ when communicated to them. The inoculation almost certainly takes place at the surface of the genital tract. In an outbreak of scarlatina in the surgical wards of Guy's hospital, Mr. Howse found the rash commencing nearly always in the neighbourhood of the wound (this may be accounted for by the warmth due to dressings). Dr. Playfair mentions a case where husband and wife were exposed to the same sewer gas, and the husband had diphtheria, and the wife ordinary puerperal septicæmia. In a case recorded by Winkel ("Verh. d. Deutsch. Ges. f. Gyn.," 1886), a patient was admitted into the Munich Hospital with a parametric abscess, from which the characteristic erysipelatous micrococci of Fehleisen ("Die. Aetiol. des Erysip. Berlin," 1883), were obtained ; a pure cultivation made ; and a rabbit inoculated with erysipelas. A primipara was delivered in the course of the next few days, and became infected. She had a vulvar wound which began to ulcerate. Erysipelas of the nates appeared. She rapidly got worse with metritis, peritonitis, and double pleurisy. She died on the twelfth day. A pure cultivation was obtained from the blood of the right ventricle which communicated erysipelas to rabbits, etc., in whose bodies the characteristic micrococci were found. His conclusion is that the genitals and nates are the starting-points in five-sevenths of all puerperal erysipelas ; Hugenberger gives 13 out of 15 ; Gusserow, 7 out of 14 ; Winkel, 30 out of 42. Primiparæ are more affected than multiparæ.

Winkel's is a case of much importance, as shewing that erysipelas is one distinct form of puerperal disease, and that pure cultivations can be obtained from a puerperal patient, and proving that it does not lose its specific characters in such cases.

According to Sänger, who gives statistics, gonorrhœa plays a most important part in the production of puerperal disease. He believes it is a frequent cause of septic poisoning in the puerperium, and that septic poisoning appears late in this period, when the disease has reached the tubes and peritoneum, generally in six to eight weeks, post partum or post abortum. This subject has been investigated also by Kroner, of

Breslau, who finds, compared to Sänger, a very rare concurrence of gonorrhœa and puerperal disease.

Prophylaxis has been most carefully studied of late. The following are essentials.

(1) Care that the drains and sewer ventilation are in perfect order. Although a woman may be apparently healthy before delivery, she may fall a victim after confinement—sometimes the disease appears to have been latent in the system during the latter part of pregnancy, (this seems to happen also in the case of some of the zymotic diseases attacking puerperal women). Dr. Playfair gives a number of cases where the free access of sewer-gas to the lying-in room was proved to be the cause of pyrexia, and this in houses of which the sanitary arrangements were supposed to be quite perfect. ("Lancet," Feb. 5th, 1887.)

(2) Absolute aseptic cleanliness on the part of the doctor, nurse, and all concerned in the care of the case.

(3) Care that the genital surfaces are kept free from contamination, especially if bruised or lacerated. Under this head will come the use of douches during and after labour, to protect the uterus from infection by purulent or decomposing vaginal discharges.

(4) Careful examination of placenta and membranes, and exploration of uterus for any parts that may be missing. In one case I saw, a placenta succenturiata about the size of a five-shilling piece was left behind and caused the most alarming symptoms.

The hands of the doctor and nurse should be disinfected on all occasions before touching the genitals—first washed and the nails brushed, and then dipped into *e.g.*, 1-1000 solution of **Corrosive Sublimate.** All non-metallic instruments must be treated in this way; metallic ones either with dry heat or carbolic. The room must be well ventilated at all times, and all soiled articles at once removed. Pads are best made of some material which can be burnt after use, as salicylic or sublimate wool.

In cases where the hand has been in the uterus, when the second stage has been unduly long, when the ovum is at all decomposed or macerated, when there is a purulent vaginal discharge, a post-partum antiseptic douche should be given. In the last two cases it will certainly have to be continued, in the last one a douche should be given towards the end of the first stage, or at the beginning of the second, both to fulfil (3,) above-mentioned, and to save the child from purulent ophthalmia. (For mode of douching see below).

In cases where there is a persistent high temperature (in very many

cases the temperature rises to 105° and 106° Fah. from emotional causes, or from want of a purge, but falls immediately measures are taken in hand to treat these conditions), *curative* measures will consist in examining the conditions of the genital passages and cavities, and treating or removing anything abnormal there; douching, intra-uterine, or only vaginal, will be most necessary here, whether any septic conditions be found or not. The pyrexia itself is to be treated in the usual way with cold externally—Leiter's coils and sponging; with **Quinine** or other antipyretics internally. Quinine should be given in 10 grain doses every six hours till the temperature falls. Warburg's tincture has proved very useful given as directed. **Antipyrin** has been much used by Dr. Paul Mundé, of New York, and he advises as a rule 10 grains to begin with, and 5 grains every half-hour till another 20 grains have been taken. The pulse is carefully watched, and the drug stopped on any sign of collapse. The same method is repeated if the temperature rises again to 102° Fah., and for several days if the pyrexia continue. Stimulants are nearly always necessary.

The abdomen has been opened and the peritoneum washed out in peritonitic cases with the best possible results, and Schultze amputated a septic corpus uteri with success. Pyæmic cases are treated in the ordinary way.

Method of Douching. The best way of doing this is as follows: a douche-tin should always be used and not a Higgenson's syringe. It holds about three pints, and is fitted with several feet of india-rubber tubing ending in a vaginal nozzle made of glass. The tin is nearly three feet above the patient's level, and filled with an antiseptic solution. The one the author has been accustomed to employ is 1 to 4,000 sublimate at a temperature of about 110° Fah. The solution is allowed to flow and expel air from the tube, and the nozzle is inserted as far as necessary into the vagina—usually three to four inches. A longer tube is required for intra-uterine treatment, or the vaginal one may be carefully passed to the fundus, or in some cases a tube with a return current may be necessary. There must—this is most important—be a free outflow. The waste solution will run off the mackintosh if given on the labour bed, or the patient may lie on her back with a bed pan under her if the douche is given during lying-in. This bed pan should be kept for the purpose and not used for the evacuations.

The uterus must be firmly pressed upon by the free hand of the person giving the douche while the solution is flowing, and for some

minutes after, and the perinæum must be depressed by the tube to the level of the posterior vaginal wall after the douche, to ensure complete empyting, as of course, there is possible danger of mercurialism if much be retained.

The author found 1 to 4,000 quite satisfactory and safe for all ordinary cases. Stronger solutions may be necessary, however, in lacerated and sloughing wounds of vagina and cervix, and for intra-uterine application in very septic cases, and will require much care in administration. They should only be given by the physician himself. **Sublimate** is the best antiseptic known, and with our present experience of cases of poisoning resulting from its use as a douche may be made a practically quite safe one. Several cases have been published on the Continent of deaths from mercurialism in puerperal women, but they were all, except one, given with much stronger solutions than the one above recommended. In a paper in the "Obstet. Trans.," London, for 1886, the author has recorded fourteen such cases of mercurialism under his own observation, and these were all women for whom 1 to 2,000 had been used. The symptoms and other details are there all entered into fully. The great point is to ensure complete evacuation of the uterus and vagina after douching, since as much as 2 ounces of a 1 to 2,000 solution were retained in one case (= $\frac{2}{3}$ gr. perchloride.) Mercurial douches should not be given to women who are the subjects of kidney disease. Other authors add anæmia and previous mercurial treatment as contra-indicating their use, but the author found no increased danger in such cases.

Late Puerperal Hæmorrhages, that is, those of same extent occurring after the lochia have lost their sanguineous character, are of much greater importance and frequency than is generally supposed. The bleeding is due to sub-involution from the retention of clots, or pieces the after-birth, generally chorion or placenta, possibly a small additional placenta. The treatment is at once to explore the vagina and uterus antiseptically with the finger, and remove anything adherent with the finger-nail. A hot antiseptic vaginal or intra-uterine douche should be given afterwards, and **Ergot** administered for a period in full doses.

Galactorrhœa. In a paper by Dr. Gibbons and the discussion following it ("Obstet. Trans.," 1887) the treatment of this disorder was touched on, as regards one variety. The case was unilateral (one breast having its gland-tissue destroyed by a previous abscess) and was not an increased flow, but one which did not cease five months after suckling was discontinued. Arsenic, iron, strychnine, rest, dry diet, pot. iod., in small and large doses, belladonna, pot. bromid., compression of *nipple*,

quinine, opium, galvanism and faradism, were all tried in vain. The disorder ceased on menstruation being established.

Other cases were mentioned where the occurrence of menstruation had put a stop to the disorder. It was generally considered that much more attention should be paid to the uterus and ovaries in such cases. Compression of the *breast* by strapping, ergot and derivations to the uterus by hot foot baths are most valuable agents in such cases.

Failure of Milk has been treated by Pierron and Aubert with the faradic current with great success, and they each publish a series of cases. They apply it across the gland for ten to twenty minutes daily, of an intensity short of causing pain. The milk re-appeared on the third or fourth day of this treatment, and became permanent. This happened in cases where the milk had ceased for eight days or longer, and in one case of Aubert's after seven months. This treatment can be recommended only in cases where the woman is in good health and quite able to sustain lactation. In cases where the milk has failed from anæmia and other conditions, of course these must be rectified first. Daily hypodermic injections of ½ gr. of **Pilocarpine** have been used with success.

Elimination of Drugs in Milk. The following drugs were experimented upon by Fehling ("Archiv. f. Gyn.," XXVII.) He administered them by mouth to healthy women.

Salicylate of Soda and **Pot. Iod.** were found in large quantities in the milk and in the child's urine. **Iodoform** applied to perineal lacerations gave an iodine re-action in the milk and sometimes in the child's urine; no harm was ever done. **Mercury** could not be detected or seen to have any effect on the child. **Opium** given by mouth and subcutaneously had no effect whatever on the child. These last two statements agree with the author's own observations. In all of fourteen cases poisoned by mercury, one fatal, no disturbance was caused in the child, nor did the opium administered in one case. **Acids, Citric, Hydrochloric, Acetic**, have not affected the re-action of the milk or disturbed the child (this would not be expected). **Chloral** in 20 to 45 gr. doses occasionally makes the child perhaps a little more disposed to sleep or be restless. **Atropine** dilated the child's pupils, no harm resulting, even when the mother had large doses. No other drugs were experimented with. No doubt idiosyncrasy plays a large part in these circumstances.

Puerperal Cystitis. There is no doubt this disease is often caused by catheterisation. Bumm found an organism which is constantly present in the lochia flourishing in the urine of a patient suffering from

cystitis. He found by experiments on healthy animals that this coccus did not grow in cases where the walls of the bladder were normal, but if by direct or indirect injury the mucous membrane became abnormal, the cocci will develop and catarrh appears. These cocci are carried into the bladder by the catheter from the adjacent parts of the vagina and urethral orifice. The genitals should therefore always be disinfected before a catheter is passed, and the instrument used with the greatest gentleness.

PURPURA. *N. Whitelaw Bourns, M.D.*

Dr. Richardson contends that under this heading, there are three distinct diseases, which he describes as types of purpura, and he classifies them as (1,) The Aqueous; (2,) The Saline, and (3,) The Vascular.

In patients suffering from the first variety, fluidity of the blood is the characteristic feature. Such persons often enjoy good health, with a freedom from eruption, though Dr. Richardson doubts if the quality of the blood is ever quite natural. He looks upon the disease as hereditary, and associated with the central nervous system.

In the second group (saline purpura) the salts of the blood are largely increased, holding the fibrine in undue solution. The eruption is a well-defined macular one, more distinct than in the aqueous variety, occurring without injury, due to long subsistence on salted food in cold regions, as in the early arctic explorations. Alcoholic excess is also looked upon as a cause, as well as the prolonged use of chloral, the decomposition of this drug leading to accumulation of the formate of sodium in the blood. The old school "scorbutics" he considers to have belonged to this type of purpura, which is non-hereditary, and resulting from improper diet or a toxic habit.

In the third type (vascular purpura) there is a marked tendency to eruption, which is often produced by the smallest physical injury, occurs in childhood, and is not markedly hereditary. The blood in this group is normal, but the small blood vessels undergo changes, which are connected with the nerve supply of the part.

TREATMENT.—In the aqueous variety Dr. Richardson recommends free purgation, fresh animal food, promote active excretion of fluid, with a mixture of the syrup of **Superphosphate of Iron,** and **Peroxide of Hydrogen** in glycerine and water.

For saline purpura large quantities of pure water, moderate feeding, no salted food, with dilute **Hydrochloric Acid** and **Peroxide of Hydrogen** internally. Styptics are forbidden, except a wash of **Tannin, Iodine** and **Myrrh,** when bleeding occurs from the gums.

In vascular purpura, good food, fresh air, avoidance of alcohol, and Dr. Richardson strongly recommends the administration of **Turpentine** internally combined with **Iron** in glycerine, or in capsules. ("Asclepiad," Feb. 1887.)

Dr. F. Woodbury found the flow of blood materially lessened in purpura hæmorrhagica, by the application of a 4 per cent. solution of the **Hydrochlorate of Cocaine**, and the internal administration of the fluid extract of **Hamamelis Virginica** in doses of ʒss to a ʒj. ("Medical Times.")

M. Farnichon gives the tincture of the **Perchloride of Iron** in ♏xx doses, and occasionally **Tannin**. When giving **Ergot** he usually combines it with **Iron**. ("Arch. de Mèd. et de Pharm. Milit.," Dec. 1886).

RELAPSING FEVER. *Alexander Collie, M.D.*

This fever is usually associated with starvation, and the patient requires generous feeding, *gradually*. More than this is rarely needed, but he should be confined to his room, if not to his bed, until the time for relapse is passed.

REMITTENT FEVER. (See "Ague.")

RENAL SURGERY. *W. H. Elam, F.R.C.S.*

There is really little that is new to report in regard to the surgery of the kidney. Many cases of nephrectomy, nephrotomy, and nephro-lithotomy have been reported; but, with one or two exceptions, no special point of interest is to be observed.

The question of the most suitable incision for removing the kidney still remains *sub judice*.

Terrier ("Revue de Chirurgie," April, p. 315; May, p. 342) dissatisfied with the lumbar operation, because large tumours can scarcely be removed thereby, and with Langenbuch's and Thornton's operation, because a lumbar incision for drainage is necessary, adopts the plan of removing the kidney by abdominal incision, and suturing the posterior layer of the peritoneum to the abdominal wound, so that the retro-peritoneal cavity is entirely shut off from the general peritoneal cavity.

M. Terrier makes the usual incision in the linea alba, then exposes the projecting kidney tumour by drawing on one side the intestines, incises in a vertical line the peritoneum over the tumour, seizes the margins of the peritoneum with pressure forceps, separates the peritoneum from the kidney, removes the kidney, ligatures the pedicle, sutures the ureter, then with deep silver sutures and superficial *Crin de Florence* sutures, he attaches the margins of the posterior layer of peritoneum to the margins of the abdominal wound; partly closing

the latter he introduces two large glass drains, and dresses the wound with iodoform gauze and general antiseptic dressing. In one case the drainage tubes were removed the thirteenth day.

He advises that when thought necessary, the ureter may be brought to the abdominal wound and sutured there.

Mr. Knowsley Thornton advocates a combined method, in which the diagnosis is made from the front, and supplemented if necessary by a lumbar incision for the purposes of removal of calculus. By these means, which Mr. Thornton has employed with great success, it is claimed that in case of error of diagnosis as to the particular organ affected, the other can be easily reached by one and the same operation. This view does not commend itself to Mr. Henry Morris, who prefers the lumbar incision. This gentleman was somewhat sceptical as to the advantages claimed for the double operation, and pointed out the difficulties which, under any circumstances, surrounded a diagnosis. All surgeons would prefer to avoid adding to the severity of the operation by wounding the peritoneum, unless some very tangible advantage accrue therefrom.

Professor König ("Centralblatt für Chirurgie," 1886, No. 35) advises the following operative procedure. The incision is carried at first downward from the last rib to a point a little above the iliac crest and near the outer margin of the erector spinæ. It is then directed upward in a curved manner as far as the outer border of the rectus muscle, about the level of the umbilicus.

The muscles exposed by this double incision—which is increased in extent when necessary—are next divided, and the kidney exposed behind the peritoneum, which is stripped from it. If it be desirable for any reason to approach the kidney from the abdominal cavity, the peritoneum is divided along the course of the oblique anterior incision. If the kidney so exposed contain pus, it is advised that the wound in the peritoneum should be closed when the organ has been freed and before it is cut into.

The author gives two examples of this latter procedure, both of which were successful. One concerned a case of renal calculus, the other a suppurative pyelonephritis. After the kidney has been dealt with, various layers of divided muscle must be united by sutures in their proper order. In order to facilitate this step, Professor König advises that a suture be passed through each divided muscle as it is incised. The sutures are retained for three weeks, and the patient kept in bed for at least four weeks after the operation.

T. F. Chavasse ("Lancet," 1887, p. 403) gives an account of three

cases that proved fatal after operation. In his comments upon these cases the author deduced the following conclusions: To obtain the greatest possible benefit from operative measures renal calculi must be sought for and removed before destruction and consequent abscess have resulted. The signs and symptoms most to be relied upon for the diagnosis of renal calculus, where no tumour exists, the patient being otherwise healthy, are the following:—(1,) The presence of blood in the urine, especially after erection; (2,) Unilateral pain passing down the ureter toward the testis; (2,) Pain on deep pressure in loin between the last rib and the iliac crest, and just external to the erector spinæ muscle; (4,) The presence of uric acid and oxalate crystals in the urine. In suppurative lesions of the kidney, nephrotomy and drainage should be the first measure in treatment.

In one case the author passed an exploring needle twelve times into the substance of the kidney, but failed to reveal a calculus and a fair sized abscess that were ultimately discovered *post mortem*.

Speaking generally, there is no doubt that the lumbar incision is safer than the abdominal. The author advises nephrectomy under these conditions: after nephrotomy and drainage have failed in cases of suppurative lesions depending upon a local irritant, in hydronephrosis, and in traumatic rupture of the kidney. Nephrectomy is justifiable also in cases of painful floating kidney when attempts to free the organ have failed, and in troublesome renal or ureteral fistulæ, but is contraindicated in tubercular disease, carcinoma in adults, and sarcoma in children.

In the "Edinburgh Med. Jour.," March, 1887, p. 789, Mr. Page reports a successful case of nephro-lithotomy in a lad aged fifteen. The boy had always been in very good health, and had never suffered from any illness. When about four years old, however, blood was noticed in his urine, and since then from time to time he had slight attacks of hæmaturia, usually brought on by running, jumping, or lifting. Pain had been a more frequent symptom than bloody urine; and latterly he had described it as a knife passing through the left loin, round the belly into the left testicle, and down the inner side of the left thigh; sometimes, too, it shot across the loins. During the attacks of pain the left testicle was retracted. Pressure over the left kidney, at one well-defined spot, gave rise to acute pain, and at this point a calculus could be distinctly felt in the kidney. It was decided to perform an operation. On Nov. 9, 1886, he was placed under an anæsthetic, and the kidney, being exposed by an incision five inches in length, at right angles to the spine, was explored by a long needle till a stone was

detected. With difficulty the kidney substance was scratched through and broken down with the finger, until the stone was liberated. The boy did not rally well after the operation, and next evening his temperature ran up to 103° F., and he was found to have capillary bronchitis of both lungs, which caused him to remain in a critical state for days. The wound, however, healed readily, and no blood was seen in the urine after the second day.

Dr. Wagner holds that the extra-peritoneal operation for nephrectomy should always be performed if possible. In cases of renal calculus, of pyonephrosis, of tubercular disease of the kidney, and of uretal fistula, he would advocate Simon's lumbar incision. In the removal of a diseased wandering kidney, or of a large renal tumour, it would be found necessary to perform the trans-peritoneal operation. In discussing the value of the different methods that have been proposed for determining the presence or the functional capacity of a fellow kidney, Dr. Wagner states that some of these are too theoretical, some applicable only to the cadaver, others too heroic and dangerous, and most of them far too uncertain to be of any real utility. ("Deut. Zeitschft f. Chir.," B. 24, H. 5 and 6.)

RESUSCITATION IN STILL-BIRTH (See "Labour.")

RETINITIS. (See "Eye, Diseases of.")

RHEUMATISM. *By J. Mortimer Granville, M.D., M.R.C.P.*

There are not many changes to note in the views entertained by the profession on the cognate subjects of rheumatism and gout; as regards either their etiology, diagnosis, prognosis, or therapy. Nor have the students of physiological or chemical pathology made any considerable addition to our stock of knowledge in respect to these always urgently important, and specially interesting maladies. The treatment of rheumatism has not been carried beyond the recourse to salicylic acid, which is practically left where it was, as regards the rationale of its use, namely, in the obscurity of the hypothesis of a specific action. Of course, no pretence can be made to rational medicine while we talk of "specifics"; but the days of this ignorance are winked at, and the use of the term tolerated as a sort of probationary designation whereby to denote such drugs and appliances of relief or cure as have either been accidentally discovered like the quinine of ague or brought into use by the more respectable powers of inference by analogy, (Maclaren) as in this employment of **Salicylic Acid** for rheumatism. It may be thrown out as a suggestion that it will be hereafter demonstrated that in respect to this particular vegetable acid as with others—for example, the lime juice in *some* instances, and the acid of strawberries

(Linnæus) or of cherries (an old German "cure") in others, the *modus operandi* is the separation of the uric acid from its bases and its elimination, by the process of which the simple iodine treatment is the most recent embodiment. It is significant of the development of this fact, as we believe it to be, that the advocates of the salicylic treatment are beginning to discover (by experience rather than reason) that it is important *not to give the salicylic acid in combination with a base.* They do not know why, but have apparently stumbled on the fact which is the central idea of the treatment by tincture or simple solution of **Iodine**, namely, that the decomposing agent must be so introduced into the system as to combine with the base of the uric acid, and detach the latter which then comes away either as a cayenne pepper deposit in the urine or in solution, iodides (of sodium principally) accompanying the uric acid which has been thrown out. The best embodiment of rules for the salicylic acid treatment are unquestionably those laid down by Prof. Latham in his Croonian lectures, 1886. Nothing more recent has surpassed them. "Certain conditions must be observed to ensure success in the administration of the remedy. They are as follows:—1. The true salicylic acid obtained from the vegetable kingdom must alone be employed. If you have to give large doses, avoid giving the artificial product obtained from carbolic acid, however much it may have been dialysed and purified. An impure acid will very quickly produce symptoms closely resembling delirium tremens. 2. *Give the acid without any alkali or base.* (*Vide ut supra.*) A very good form is to mix 100 grains with 15 grains of acacia powder and a little mucilage. Allow the mass to stand and harden, then divide into thirty pills. 3. Place the patient fully under the influence of the drug—that is, let him have sufficient to produce cerebral disturbance—*i.e.*, buzzing in the ears or headache, or slight deafness; with the development of these symptoms the temperature and the pains in the joints will begin to decline. To an adult I generally administer three doses of 20 grains (six pills) at intervals of an hour, and if the head remains unaffected, a fourth dose at the end of another hour; and then repeat the 20 grains every four hours until the physiological effect of the remedy shows itself. In the majority of cases from 80 to 100 grains are enough. In severe cases 140 to 150 grains may be required. Afterwards about 80 grains a day are sufficient, and as the temperature declines smaller quantities will develop their physiological effects, 60 or even 50 grains being then sufficient to produce cerebral disturbance. It would appear that as long as the rheumatic poison is circulating in the system, the physio-

logical effect—that is, the effect it produces in the healthy organism—does not show itself; acting as an antidote, the greater the amount of poison the larger must be the dose of the remedy; but as soon as the formation of the *materies morbi* is stopped, then the excess of the remedy acts as it would in the healthy organism, and its peculiar physiological effects are developed. It is a very striking illustration of the difference between the therapeutic effect of a remedy and its physiological action. 4. Give the patient from 40 to 80 grains daily for ten days after all pain and pyrexia have passed away. 5. Let the patient's diet consist entirely of milk and farinaceous food for at least a week after the evening temperature has been normal. On the other hand, if the patient has meat and soup, you may look forward with fair probability to a relapse. 6. Take care to maintain a daily and complete action of the bowels. Calomel is the best purgative, from 2 to 5 grains at night, followed in the morning, if necessary, with a saline draught. This is the most important adjuvant to the action of salicylic acid, and I will presently explain to you why this is the case. 7. Let the patient be enveloped in a light blanket, and with no more bedclothes than are sufficient to keep him from feeling cold. The object of the treatment now is to cool the patient—not, as in former times, to sweat the poison out of him; and the cooler he is kept the sooner will the temperature be lowered. In fever increased heat increases the metabolism just as in a cold-blooded animal.

"These are the seven rules upon which I act. I have given the true salicylic acid where there have been both aortic and mitral mischief; and I have also given it in rheumatism complicated with pericarditis, and as yet I have seen no bad result from it. Of course in cases of pericarditis, accompanied with delirium, the use of the remedy requires caution; you cannot tell when the system is saturated with the remedy, and you must therefore trust to smaller doses and other means for controlling the disease. Further, if pericarditis or endocarditis, pneumonia, or pleurisy have been developed, the remedy is powerless over the mischief which is done; it will neutralise the poison producing the mischief so as to stop its extension, but the inflammatory exudations will undergo their usual changes unabbreviated in their course. We see the same thing in tonsillitis. Given early enough, salicylic acid will stop the mischief, but if exudation of lymph has taken place salicylic acid is powerless to cause its absorption."

Dr. Latham's explanation of the action of calomel is as follows. It is worth noticing for its value in regard to calomel in other morbid

states, even more perhaps than in rheumatism. Therefore we re-produce it in full. "I have referred to the necessity of keeping up daily and sufficient action of the bowels. The benefits resulting generally, in rheumatism, from the so-called purgative plan of treatment have always been recognised by the older physicians as striking and satisfactory. By the judicious use of cholagogue purgatives we eliminate the bile from the intestines and so remove from the system a quantity of glycocine, which if re-absorbed would lead to the consequent formation of uric acid. Calomel is unquestionably of service here. Doubts may exist as to whether it promotes the flow of bile from the liver or not; but when the bile gets into the intestine calomel will cause its evacuation. The conclusion seems inevitable that mercurial purgatives given to healthy persons cause the escape of large quantities of bile from the alimentary canal."

The limitation of nitrogenous food and the recourse to purgatives to prevent the formation of uric acid is not in our judgment sound policy, except in decidedly sthenic cases of which comparatively few are met with in daily practice. By cutting off supplies of nitrogenous aliment, the strength of the organism to resist and outlive the disease is impaired, even though, possibly, some of the factors of the morbid state are reduced. Practically the worst cases we have seen have been kept on low diet and purged, and rarely have we seen cardiac mischief, in private practice, in cases which have *not* been so lowered with the idea of "preventing the formation of uric acid," or in hospital practice, except in cases which did not fall under the suspicion of being caused—as Dr. King Chambers believed the majority of cases of cardiac inflammation in the course of rheumatic fever occurring in hospitals to be caused—by exposure of the surface or cold. There is an additional reason for recalling this observation in connection with Dr. Latham's rules because in fulfilling the seventh it would be very easy to chill the surface and, as Chambers thought, excite the heart to undue action reflexly by cold. The part the nervous system plays in all forms of disease should never be for a minute forgotten. As regards the loading of the blood with nitrogenous food and waste it must be borne in mind that no sick person with a coated tongue can or does, take as much of such food as in health, and it is not therefore *excess of nitrogen in the blood*, but inability of the organs to eliminate the same which confounds the practitioner, and his aim should be to remove the obstacle to the performances of natural processes rather than to diminish the supply of food, thereby cutting off the accustomed supplies of nutriment at the precise moment when the vital strength

of the organism is especially needed. The practical question resolves itself into one of capacity and fitness as regards the principal emunctory—the kidney. No case of acute, or even chronic rheumatism is adequately watched in which the proportional quantities of both urea and uric acid eliminated in the urine, are not ascertained at very short intervals, in acute cases *at least daily*. When salicylic acid is employed it is imperatively needful that the urine should be tested for its due elimination. It appears as salicyl hydride, and the urine strikes a purple red with persalts of iron. Salicylate of lithium has been extolled by Vulpian and praised by Dr. Bartholow for the relief and removal of the pains and swellings which so often persist after the first acute stage of rheumatism has ended. Four grammes (about 60 grains) a day is said to be the quantity of salicylate of lithium usually required. Headache, vertigo, and dulness of hearing are induced and then relief. It is alleged that the whole effect cannot be due to the salicylic acid, as no other salt than that of lithium produces the specified results. Possibly lithium emphasizes the action of salicylic acid as it does that of bromine : the bromide of lithium being nearly twice as active as the bromide of potassium, in the same way. In the treatment of rheumatism the proportional effects of salicylic of lithium are said to be as 4 to 6 or 7 of sodium.

The hyperpyrexia of rheumatism has engaged much attention, and very high temperatures are recorded such as "108° in the axilla and 111° in the rectum," (Foxwell), even in spite of the administration of salicylic acid in very full doses (140 grains in fourteen hours). Kaisin, even in such quantities as 144 grains in forty-eight hours, is reported as being without effect. Dr. Foxwell still approves the cold pack or bath, and is of opinion that its administration should be somewhat prolonged. The view of King Chambers as to the reflex effect of cold at the surface, upon the heart, should not be forgotten in this connection. It is thought that when the temperature rises to 105°, the cold bath may be used, a sudden shock being avoided by commencing with a temperature of 90° and reducing it gradually to 70°. When the patient's temperature is reduced to 100° or 99° the treatment is to be arrested, and the sick person wrapped in warm blankets, or collapse may supervene. Those who possess the courage to have recourse to this method will do wisely to be keenly alive to all the possibilities of such a plan of treatment, not merely as regards the blood-state but the impression produced on the nervous centres.

Salol is recommended by Sahli, Herlich and others for the relief of pain and reduction of temperature in articular rheumatism. From 6

to 8 grammes are given daily to adults. It is of no value in cases of endocardiac complications which commence and continue in spite of it. Salol is a salicylic phenol ether, combining 60 per cent. of salicylic acid with 40 per cent. of carbolic acid. During the administration salicyluric acid or phenol-ether-sulphuric acid is discovered in the urine. Poisoning by carbolic acid is a possible contingency when large doses are taken or the use of salol is prolonged. The effect is said to be palliative rather than curative. The antipyretic effect is stated to be "fairly certain." Tinnitus aurium may be produced by it.

Antipyrin is regarded by Fränkel as a specific agent in acute articular rheumatism, but practically it is an alternative to salicylic acid in its use and value. There are sometimes idiosyncrasies as regards antipyrin, and a papular exanthem, resembling measles or scarlet fever, extending over the body but chiefly appearing on the extensor surfaces of the limbs and accompanied by troublesome itching is a drawback to its use. Fränkel thinks very highly of it. He gives tablespoonfuls of a simple solution of the drug in Aqua menthæ (10 : 150), without sugar, etc. It is bitter, but easily taken in this form, leaving no after-taste. Each tablespoonful contains 1 gramme. For the first three days a tablespoonful is taken every three hours, *i.e.*, 5 grammes a day. Then, even though the fever and all local symptoms may have disappeared, for five days 3 grammes a day are taken in three separate doses, so that generally from 25 to 30 grammes constitute the treatment. M. Clément has used antipyrin largely in the Hôtel Dieu at Lyons, in the treatment of acute and subacute rheumatism, and is inclined to prefer it to sodium salicylate from all points of view. Its effect is, he considers, rapid and certain, and it brings with it no vertigo, deafness, or tinnitus. (This is denied by other observers.) In all cases in which it fails, sodium salicylate fails also ; and further, in a few cases in which sodium salicylate fails, it succeeds. Of this M. Clément has convinced himself from the treatment of successive attacks—the earlier by salicylate, the latter by antipyrin. Its place in the treatment of rheumatism has been much criticised, and said to be very limited on account of its weakening power over the heart, which forbids its employment when there is cardiac failure. This view has been supported by the post-mortem observation of the heart in diastole in cardiac cases where it has been used. M. Clément declines to admit this observation as an adequate proof of any depressing effect on the heart, for a condition of diastole is habitual in such cases, and no trace of such an effect can be found clinically."

It is worthy of note that nearly all the new remedies for rheumatism are "antiseptic" and "destructive of germs." This leads to the remarks that the microbic hypothesis of disease is extending, and that already rheumatism is—it may be that next gout will be—included in the category of disease caused by these organisms. Guttmann reports the following remarkable case :—"A hitherto healthy boy, 14½ years of age, showed febrile symptoms, complaining of pain chiefly in the left thigh. At first he was supposed to be suffering from acute osteomyelitis, but as within thirty-six hours there occurred pain and swelling of the knee-joints and pain in the left hip-joint and the left elbow-joint, it became clear that there was multiple acute articular rheumatism. Within four days pericarditis with marked effusion appeared. He died, and the *post mortem* showed the pericardial sac to be filled with a fibrinous purulent exudation. Both kidneys were permeated with abscesses and purulent infiltrations. In the renal pelvis there were sandy concretions of uric acid. The other organs were not materially changed, except that the left pectoral muscles contained some little abscess-centres. Of the affected joints only the right knee was opened, and contained about 20 grammes of a sero-fibrinous exudation. Some of this, as well as of that from the pericardial sac, Guttmann cultivated in gelatine, and large quantities of cocci were developed in all the tubes. The gelatine was liquefied in a few days. In twenty-four hours at 30° C. (the temperature of the chest) the staphylococcus aureus had grown in cultivations from the pericardial sac, the kidney, and the joint, nor was there any other kind of coccus in any of them. It is therefore clear that the staphylococcus must have entered the inner organs through the circulation from the joints. It is also possible that sometimes they appear in different parts simultaneously."

It would be premature as yet, to hazard any attempt to determine how far the occurrence of particular developments of bacteria in association with special pathological conditions is causal or merely a concomitant circumstance or effect. The fact of specific associations cannot however, we presume, be called in question. An interesting though, of course, distinct matter is the recognition of gonococci in the several fluids poured out in gonorrhœal rheumatism.

"The views of Neisser and Bockhart on this subject have lately received confirmation at the hands of Bergmann, who has shown that in a recent case of **Gonorrhœal Rheumatism**, gonococci are to be found in the joints when they are inflamed. In the cases in question, Bergmann incised the joint, and washed it out with a ten per cent.

sublimate solution. In the turbid fibrinous fluid which was evacuated, gonococci were found in abundance. They occurred both inside and clinging to the walls of the pus-corpuscles." ("Centralb. f. Chir., p. 800, 1886.)

Dr. Frank Hartley, has discussed in the "New York Medical Journal," the subject of gonorrhœal rheumatism, especially in the female, arriving at the conclusion that this affection is by no means so rare among women and children as it is the fashion to assume, and expressing an opinion that "it seems scarcely probable that an affection like gonorrhœa will limit itself to the joints, for when one examines the literature upon the subject, he finds ample proof at least of a very close connection between the gonorrhœa of the urethra and other portions of the body. Terillon's report of two cases in the psoas bursa; Railton's of a case of endocarditis; Morel's of two cases of pericarditis and eleven of endocarditis; Marly's statement that gonorrhœa may be found in all serous membranes, and that the so-called rheumatism is not always the connection between the specific inflammation and the disease of the serous membrane; Petrone on the possibility of certain eruptions in gonorrhœa resembling roseola and scarlatina being due to the presence in the blood of the gonococcus; Fournier's declaration that gonorrhœal ischias occurs most frequently with other complications (arthropathies, tenosynovitis, and ophthalmia), and that it recurs with the exacerbations of the gonorrhœa; Basset's report of the occurrence of conjunctivitis, tenosynovitis, and multiple synovitis in a single case; Scarenzio's report of two cases of ischias alternating with the arthropathies; Harly's on the involvement of muscles, and many others in their reports upon the atropathy of gonorrhœa—all speak in favour at least of a very probable connection between the inflammation of the urethra and other organs."

Dr. R. W. Taylor, of New York, recommends **Oil of Winter Green** in gonorrhœal rheumatism. He has tried it in all varieties of the disease, both acute and chronic; and without speaking enthusiastically of his results, he is well satisfied with them. He thinks this remedy will be found of most benefit in recent cases, where the fibrous structures of joints and muscles are involved, and in which there is a large amount of serous effusion. In cases complicated with hydrarthrosis, the results were sometimes disappointing, whilst in the very chronic cases it did not prove itself a trustworthy remedy. It is powerless to remove structural changes when they have once taken place, but is of service in relieving and curing the accompanying cachexia. A trial of it should not be allowed to supersede the methods by counter-irritation and other means.

Rheumatism in children, a most important subject, has engaged the attention of Dr. Angel Money, who is of opinion that children's rheumatism may be said to be characterised by the frequency of occurrence of erythemata, nodules, endocarditis, and chorea, and by the slightness of the arthritis and pain, pyrexia and sweating, that arthritis is of very doubtful occurrence, and that the slight effusions about joints met with in the rheumatism of children ought to be regarded as of the nature of a peri-arthritis, the slight spontaneous pain and not great tenderness certainly not militating against such a view. He thinks with Dr. Barlow, that effusion into the sheaths of tendons is decidedly a feature of the rheumatism of children. The subcutaneous nodules are regarded as of the first importance in the study of the affection in childhood. Accepting Dr. Barlow's homology between them and the bases of valvular vegetations, he is of opinion that the changes in the one are in some sense representative of the alterations in the other. He thinks that in half the cases of severe rheumatic heart disease in children nodules may be found. The greater frequency of endocarditis in children may be partially accounted for by the slight painfulness of the arthritic manifestations, which do not prevent children suffering from a moderate degree of rheumatism from running about; mechanical strain probably thus plays an important part in exciting the "nodular" valvulitis. It is by no means rare to find disease of the valves of the right side of the heart in rheumatic children. In rheumatism chorea must be regarded, like the nodules, as a symptom, an expression of the disease. Although chorea, that attracts attention, is by no means a universal symptom of rheumatism in children, still it is remarkable how very frequently a slight amount of involuntary twitching of the fingers is present. Erythemata are probably even more frequently present than observed, for they were sometimes so fugacious as to be easily missed. Stiff-neck and backache are probably affections of the interstitial connective tissue of muscle, and not an affection of the muscular protoplasm proper. For treatment Dr. Money employs moderate quantities of bland fluids like barley-water or toast-and-water, to which may be added the alkaline carbonates. **Salicylate of Soda** or **Salicine** is he thinks of value in some cases of rheumatism in children, but in his experience they are of less value than in adults, whose pain and joint affection are so much more parts of their suffering.

It seems to us that the same principles must govern the treatment of rheumatism in children as determine the treatment of the same disease in adults, and these are mainly the elimination from the

blood of those component parts of it, which tend to set up irritation and to form the deposits, and the principal of these is uric acid which is always present in the urine of children in large quantities and needs to be rapidly passed through the kidneys. It is well known that the uriniferous tubes of infants dying after two or three days of independent existence but within a fortnight from birth, are in a large proportion of instances found blocked with uric acid and urates. The urine in a child of six years with very little the matter with him may yield results such as the following, taken from a case book of the present writer: Uric acid ·4116 gr. per oz. with urea, 15 grs. per oz., and an acidity equivalent to 3·465 parts per 1000, oxalic acid crystals being present in quantity. The notion that a uric acid excretion is a reversion to a lower type is not, we think, borne out by the facts of comparative physiological chemistry. It is true that birds excrete uric acid, but that is because they live chiefly on vegetable food. The predatory birds excrete urea as well as uric acid, as do the carnivorous animals generally. It must now be assumed that whatever may be the inter-relations of rheumatism and gout, uric acid is the irritating agent in both affections. It cannot be called *materies morbi*, because it is a normal constituent of the urine, and forms a normal product of the metabolic processes of the organic life and functions. It is morbid only when found in excess *in the blood*. If we are permitted to hazard a conjecture, it may be that perhaps the difference between rheumatism and gout consists in the fact that in one the determination is towards the excreting apparatus of the skin and the serous membranes, while in the other the tendency is to deposit urates in the tissues, or to pour out uric acid on the mucous surfaces, as in bronchial, catarrh and bronchitis, middle-ear catarrh, and other familiar affections of gouty origin. The true *modus operandi* of cure in both maladies is to promote the elimination of uric acid by the kidneys, and to this end it generally needs to be separated from its combination with bases and then put in solution. These remedies which act as, to use an old term, "antiphlogistics," may reduce heat and relieve local tension, but their curative action is either destructive or eliminative as far as the uric acid is concerned.

A subject of great practical moment at the bedside is the connection of erythema nodosum with rheumatism. This is a very old topic. The association of the two maladies was recognised nearly fifty years ago. Dr. Stephen Mackenzie is of opinion after the collation and study of a large number of cases, that endocarditis is likely to occur in erythema nodosum without arthritic symptoms. The condition of the heart in the course of this malady is therefore, of manifest concern.

RHINOSCLEROMA. *N. Whitelaw Bourns, M.D.*

A rare disease usually found attacking the nose. Is slightly raised, with a flattened plate-like surface, sometimes uneven from the aggregation of tubercles which constitute the growth. The patch is firmly bound down, and of a stony hardness. The colour is that of the surrounding skin, or of a pinkish brown hue.

TREATMENT.—Removal with the knife, or destruction by caustics. The disease is exceedingly obstinate, showing a marked tendency to recur.

RICKETS.

No fresh information has been advanced respecting the treatment of this disease during the year. The experiments of Kassowitz with phosphorus were fully reported in the "Annual," 1887.

He administered **Phosphorus** in gradually increasing doses, beginning with the most minute, and found that the compact portion of bone was increased at the expense of the cancellous tissue, but he further ascertained that this increase was due to a shrinking of the medullary spaces, and not to fresh deposition of bony plates. On increasing the dose little by little, however, he at last came to a point where the action of the drug appeared to be reversed. The author began using the drug in cases of rickets in 1879. He uses a solution of 1 to 100,000 and the dose of one to two teaspoonfuls daily. The total number of cases treated was five hundred and sixty, and each of these was under observation for at least a month. The effect of the drug was estimated by its action upon the bones of the skull; and this was so remarkable that cranio-tabes of a most marked character, involving both the occipital and the parietal bones, disappeared completely in from four to six weeks, and at the same time the fontanelles and sutures were reduced to normal proportions. Moreover, these effects were obtained not in one but in hundreds of cases. Laryngeal spasm was frequently present, and disappeared *pari passu* with the symptoms proper. The drug also exercised a favourable, though less rapid, effect upon the rachitic thorax and spine; and children four to six years old, who had never been able to stand or sit upright, were found running about after taking phosphorus for one or two months.

Wegner some time ago made a similar series of experiments with identical results.

RINGWORM (See also "Tinea.")

The following are the formulæ which have recently been employed in the treatment of this disease:

℞ Ac. Chrysophan. gr. vii | Chloroform Pur. ℥j
M. Sig. Apply two or three times daily by means of a minute sponge-mop.

℞ Hydrarg. Oleati ℥j | Olei Deelinæ ℥ix
M. Sig. To be well rubbed into the parts twice daily.

℞ Hydrarg. Bin-iod. gr. v | Ung. Spermaceti ad ℥j
M. Ft. Ung. Sig. To be applied once or twice daily.

RÖTHELN, RED MEASLES, RUBEOLA.

The patient should be confined to his room or possibly his bed, but beyond this no special treatment is needed.

SALPINGITIS and DISEASES OF THE FALLOPIAN TUBES.

John W. Taylor, F.R.C.S.

The literature of these has been abundant, but very scattered and fragmentary.

Martin, of Berlin, has written on the pathology of tubal disease. ("Zeit. für. Geburt. und Gynäk.," Bd 13, Hft. 2.) The microscopical appearances in the various stages of salpingitis are essentially the same as those which have been observed in other mucous membranes under similar conditions. Martin accordingly writes of catarrhal, interstitial, follicular and suppurative salpingitis. The frequent co-existence of all these forms makes the division of questionable utility from a clinical standpoint.

Saenger has written on the classification of salpingitis ("Amr. Jour. of Obst.," March 1887.) He classifies the various forms of inflammation of the fallopian tubes :—

(*a*) Forms of salpingitis produced by known specific microbes :—

(1,) Salpingitis gonorrhœica ; (2,) Salpingitis tuberculosa ;
(3,) Salpingitis actinomycotica.

(*b*) Forms of salpingitis due to specific microbes, identical with those producing traumatic infection.

(4,) Salpingitis septica.

(*c*) Forms of salpingitis produced by specific, but as yet unknown microbes.

(5,) Salpingitis syphilitica.

The naked-eye *morbid anatomy* in cases of tubal distension, the mode of its production, and the principles of *diagnosis*, were considered by the present writer in the "Medical Annual" for 1887, pp. 54 and 55. In this article the great similarity which often exists ("per vaginam") between the tumour of a distended tube, and that formed by an acutely retroflexed fundus was specially noticed. In position, contour, feeling of resistance to touch, and occasionally even in tenderness, the resemblance may be striking ; but it is quite possible

for a distended tube to be present in a different situation, and therefore without this sign. The differential diagnosis of distention of the fallopian tubes from uterine myoma and small tumour, cyst or abscess of the ovary, formed the subject of a short paper contributed by him to the "British Medical Journal" of April 17, 1886. As subsequent cases have tended to establish the general correctness and utility of the opinions then expressed it is here produced :—

(1,) Menorrhagia may be common to both diseases ; but in uterine myoma it is painless, in tubal disease it is very painful.

(2,) Moderate enlargement of the uterus (from three to three-and-a-half inches) is present in tubal distension accompanied by hæmorrhage (as in most cases where metrorrhagia is a prominent symptom) ; an enlargement beyond this may generally be expected in myoma.

(3,) The tumour formed by distension of the fallopian tube is always single or double, and is always posterior to the uterus ; nodular myoma is usually multiple, and the situation of the outgrowths variable.

(4,) The tumour formed by a distended tube, even when chronic and quiescent, is always very tender to touch, whether that touch be from the examining finger of the surgeon, or from the passage of scybala through the rectum ; a myomatous nodule, unless inflamed, is comparatively insensitive. Probably, for a similar reason, dyspareunia is a very general symptom of tubal disease, but is almost unknown in myoma.

(5,) The outline or shape of a distended tube is fairly constant, in possessing a longer and a shorter axis ; that of nodular myoma is round or quite irregular.

(6,) The tumour caused by a distended tube varies in its firmness or consistency, and at some time or other will show signs of elasticity or fluctuation ; that of nodular myoma remains hard.

(7,) Both a distended tube and myoma of the posterior uterine wall may sink lower in the pelvis by causing retroflexion of the uterus ; but, apart from this, the former, though adherent, tends to sink slowly by its own weight ; the latter reaches a lower point only by increased growth.

(8,) When pregnancy occurs, the uterine enlargement being caused chiefly by the development of the muscular tissue of the uterus, a myoma of this tissue will be much more likely to be raised by the growing uterus than a distended tube, which is only adherent, and often but lightly, to its peritoneal investment.

The only other condition that is likely to be confounded with distension of the fallopian tube is cyst or abscess of the ovary. A special

form of cystic disease of the ovary is often, perhaps generally, combined with occlusion and distension of the tubes; and if the latter be correctly diagnosed in these cases, this is sufficient for every practical purpose. But ovarian abscess or cystoma of the ovary in an early stage, the associated tube remaining normal, needs rather careful differential diagnosis from a distended tube. I have found the chief point of difference to be this: that, in cyst or abscess of the ovary, a space can be found between the tumour and the uterus unoccupied by any swelling; in distension of the fallopian tube, the tumour is continuous with the uterus. By this means I have on two or three occasions diagnosed a cystic condition of the ovary only, when tubal disease has been expected; a diagnosis which has been confirmed by operation. ("Brit. Med. Jour.," April 17, 1886, p. 737).

Martin, Hegar, Savage, Tait and others, have written on the *treatment* of tubal disease.

Martin points out the value of medical treatment; *bleeding*, *rest*, *purgatives* and *sedatives for extreme pain*, as well as *remedies causing absorption* being used with considerable success. "Only one-fifth of his cases required extirpation."

Hegar has written specially on tuberculosis of the fallopian tubes. The treatment for this is *complete bilateral removal* when other organs are free from disease or but slightly affected. The result of this operative treatment is surprisingly good. Of six cases reported by him, five recovered and remained well. This is also borne out to a limited extent by the experience of the present writer and other observers.

Tait has written during the past year on the "unsatisfactory results of unilateral removal of the uterine appendages ("Birm. Medical Review," 1887) arguing from a list of twenty-six cases that when an operation is called for in inflammatory disease of the appendages, the removal should be bilateral, even if the tube and ovary of one side appears to be healthy. This generalisation is probably premature and too sweeping. The advice may be wise in those directly contagious forms of salpingitis which form the first group of Saenger's classification, especially in gonorrhœal salpingitis, but in the other groups, cases may be found in which unilateral removal has been perfectly successful and not followed by return of the disease, even when pregnancy has occurred subsequent to the operation.

Dr. Savage, of Birmingham, has drawn attention to the fact that most cases of so-called parametritis and perimetritis are found on operation to be cases of inflammatory disease of the appendages (see

special article on "Pelvic Inflammation.") Pyo-salpinx and abscess of the ovary are frequently met with under these conditions.

Tubal pregnancy, rupture of the tube, intra-abdominal hæmorrhage, and the successful treatment of this condition by *early operation* needs a paragraph to itself, Tait, who has been the largest and most successful worker in this field, completes the history of thirty-five cases in the November number of the "British Gynæcological Journal."

The duty of early operation for the rupture of a tubal pregnancy may be considered as established: the more so since the diagnosis may often be made with considerable probability from the history and symptoms only. *Arrest of menstruation for two or three months, followed by sudden abdominal pain and collapse, of urgent and dangerous character*, are the leading features indicative of this condition.

SCABIES. *N. Whitelaw Bourns, M.D.*

The indications for treatment are: (1,) Destroy the acarus and eggs. (2,) Relieve the condition induced by scratching. (3,) Prevent re-infection by the clothing.

Before applying a parasiticide, soothing applications are frequently called for to allay the skin irritation. **Sulphur** is the drug most frequently employed for the destruction of the acari, and may be used either as an ointment; a bath; a vapour bath; or applied to blankets, which are carefully wrapped round the patient. In all cases treatment must be commenced by washing with soft soap and water, followed by a hot bath. A favourite remedy with McCall Anderson is the following:

℞ Styracis Liquidi ℥j | Adipis ℥ij
Melt and strain.

Duhring gives the following as an excellent preparation for children:

℞ Sulphuris Sublimati ℥j | Adipis ℥j
Balsami Peruviani ℥ss
M. Ft. Ung.

Bulkley uses the following formula:

℞ Styracis Liquidi ℥ij | Unguenti Petrolei ad. ℥j
Unguenti Sulphuris ℥ij to ℥iv
M. Et. Ft. Unguentum.

Or we may have our patient thoroughly rubbed with **Chlorinated Oil**, which is made by passing dry chlorine gas through a tube reaching to the bottom of a bottle of olive oil, until no more gas is absorbed.

To prevent re-infection the clothes must be boiled, ironed with a hot iron, exposed to the fumes of sulphur, or exposed to a temperature

of 150° Fah. The acari are said to be killed by not wearing the clothing for a fortnight.

SCARLET FEVER. *Alexander Collie, M.D.*

A mild and uncomplicated case requires no special treatment. The patient should be kept to his bed, or at least his room for about three weeks; he should not take open air exercise until the end of the fourth week, so that it may be quite certain that the kidneys are safe; and he should not associate with susceptible subjects until desquamation be complete, a process which in a large number of cases takes eight weeks, often ten, and sometimes longer. Great care should be taken that the mouth and fauces be kept clean by washing with **Condy's Fluid,** and should the tongue become dry and denuded it may be moistened with **Glycerine of Borax.**

In cases where the fauces slough and there is rhinitis with enlargement of the cervical glands **Alcohol** should be freely given in the form of port wine and champagne; and it is important to observe that children in this condition take with advantage from six to eight ounces of port daily. Here it may be pointed out that death sometimes arises from sloughing of the internal carotid, and it is just conceivable that life might be saved by speedy ligature of the common carotid. Simple enlargement of the glands should not be interfered with; but free incisions should be made when an abscess has formed. When cervical ulceration occurs, **Iodoform** and a solution of **Chlorinated Soda** may be applied. Discharges from the nostrils and ears may be treated by frequent injections of **Condy's Fluid.** Scarlatinal rheumatism should be treated by time, warmth, and **Opium.**

During convalescence the clothing should be warm and the diet liberal. Chills should be carefully avoided. For albuminuria, **Iron, Wine,** and **Cod-liver Oil** may be employed; and care should be taken that the bowels act daily.

In nephritis the bowels should be at once freely opened, and kept so by drugs which do not act upon the kidneys; plenty of drink should be administered, sometimes a little gin and a warm bath at least once a day. On the appearance of laryngeal diphtheria the patient's atmosphere should be moistened, and tracheotomy performed when there is distinct "distress" in breathing. During the year some attention has been directed to the observations of Dr. Klein and Dr. Jamieson on the subject of "micro organisms" in this disease: and certain practitioners have endeavoured to treat it on the germicide principle, first on the fauces before the inoculation has taken place,

and second, on the blood. No criticism of these procedures is as yet possible; but one may admit with Dr. Dukes that in the first instance statistics can hardly be obtained, because since no rash appears and no desquamation follows, sore throat treated in this way might have been an abortive attack of the scarlet fever "germ" (or no scarlet fever at all), and it may be added that by the working of a simple sum it will be found that in a child of 65lbs. weight with 5lbs. of blood, 350 grains of carbolic acid will only produce a one per cent. solution, whilst in a mixture containing the biniodide of mercury every grain of the salt will be diluted with 35,000 drops of blood. The peritonitis, pericarditis, endocarditis, and the other affections which occasionally arise require no specific treatment, but the desquamation of the feet will be facilitated by frequent warm bathing, and also by the application as often as may be necessary, of a mixture containing equal volumes of **Salicylic Acid** and flexible **Collodion**. (Hopwood).

SCIATICA.

The remedies employed in the treatment of this affection are described in the "Dictionary of New Treatment," 1887, p. 349. More recently **Antipyrin** and **Acetanilide** have been highly recommended. (See *Aconite*, p. 8; *Antipyrin*, p. 14; *Drumine*, p. 47; *Methyl*, p. 76; *Phytolacca*, p. 82).

SCLERODERMA. *N. Whitelaw Bourns, M.D.*

Dr. Graham records a case of scleroderma in a woman aged 47, in whom nearly the whole integument of the body was indurated. He ordered **Syrup Ferri Iodidi** with 5 minim doses of **Liquid Arsenicalis** three times a day after meals. Electricity to be used daily as a local stimulant; and in three months the disease had nearly disappeared. ("Jour. of Cut. and Ven. Dis.," vol. iv., No. 2).

Magelssen cured a case of scleroderma of the face which had existed for four years, by **Massage**. Any interruption of the treatment was followed by a relapse, but by perseverance a cure was finally effected. ("Archiv. für Derm. und Syph." Heft. 1, 1886).

SCROFULODERMA. *N. Whitelaw Bourns, M.D.*

The treatment in this disease must be directed against the general condition, attention being paid to the hygienic surroundings. A generous diet allowed, and the internal administration of **Cod-liver Oil, Iron, Phosphorus,** or **Iodine**. McCall Anderson uses a pill containing $\frac{1}{80}$ of a grain of **Phosphorus** with the same quantity of **Arsenious Acid**. Not infrequently the free use of the **Dermal Curette** is called for, followed by **Mercurial** lotions, or ointments, as the **Ung. Hydrarg. Oxid. Rub.**

SEBORRHŒA. *N. Whitelaw Bourns, M.D.*

Mannino in two cases of seborrhœa of the face and scalp observed parasites, presenting all the morphological characteristics of the microsporon of Vidal; and he points out that their irritative influence is shown, on the one hand by erythema and desquamation of the horny epidermis, and on the other hand by the increased secretion of the sebaceous glands; both affections, he goes on to say, are benefited by anti-parasitic preparations. ("Ann. de Derm. et de Syph.," vol. viii., No. 6).

The treatment must be both constitutional and local. Fresh air, **Arsenic, Cod-liver Oil**, and **Iron**, are frequently indicated; locally the parts must be kept clean, and free from inspissated sebacious matter by soaking with oil, or oily applications, and thorough washing with soft soap and water. Or, as recommended by Hebra, the parts may be washed with the following.

℞ Saponis viridis ʒ viij | Alcoholis ʒ iv
Solve et filtra.

Duhring speaks highly of an ointment of **Precipitated Sulphur**, from half a drachm to two drachms to the ounce; also of the **Red Oxide of Mercury.**

℞ Hydrargyri Oxidi Rubri gr. x | Bal. Peruvianæ gr. v
Ungt. Petrolei ʒ j | M. Ft. Ungt.

A small quantity to be applied once or twice a day. ("Diseases of the Skin," p. 127).

SHINGLES. (See "Herpes Zoster.")

SKULL (Exostosis of the). *C. Stonham, F.R.C.S.*

Mr. Nettleship has put on record ("Brit. Med. Journ." vol. 1, p. 283, 1887) an interesting case of symmetrical exostosis, with double optic atrophy. The patient, a boy aged 12, had large symmetrical exostoses in the temporal and mastoid regions, and on the outer wall of each orbit, as well as in the region of the anterior and posterior fontanelles. A gap existed between the nasal process of the maxilla and frontal bones on each side, but the central ridge was normal, the orbits being too far apart. There was double optic atrophy, with evidence of former inflammation most marked in the left eye. The condition was congenital.

SKULL (Fractures of the.) *C. Stonham, F.R.C.S.*

Fractures of the skull may implicate the vertex, or the base, or both. In the vault the fracturing force is usually applied directly, and the resulting fracture is stellate. It may be simple or compound, comminuted or depressed. In rare cases only one table is fractured, and this is usually the inner. In punctured fractures it is important to

note that the aperture of exit is greater than that of entry, and hence early trephining is called for, in order to escape the inflammation of the membranes, which would be caused by the irritation of the splinters.

In many cases a certain diagnosis is impossible since the fracture is linear, and this is more especially the case in simple fracture.

In simple linear fracture there is no special treatment required beyond that of the accompanying concussion. In more complicated cases trephining or elevation is necessary, except in cases of simple fracture unaccompanied by brain symptoms. With regard to the question of operative interference, Dr. P. E. Muskett has published a paper in the "Australian Medical Gazette," Oct. 15th, 1886. He adduces cases to show the value of early interference ; and thinks that an operation is useful, especially as guarding the patient against septic inflammation. Similar views have been expressed by Dr. Wagner, of Königshulte. Dr. Muskett further states that the principal dangers to be feared in these cases are acute spreading inflammation of the brain, or membranes, chronic inflammation, cerebral softening, abscess, and traumatic epilepsy.

Fractures of the base, unlike those of the vault, are usually caused by indirect violence, which may be applied, either through the vault or spinal column. In fracture by direct violence the injury is usually inflicted through the nose or eye, the bones here being thin and easily broken ; and it is important to note that such an injury, accompanied as it often is by very slight external evidences, may be entirely overlooked at first unless great care be taken.

Fracture of the base is also said by some to occur by contre-coup. On this still unsettled question M. P. Berger and Mdlle. A. Klumpke, Paris, have written a paper ("Rev. de Chir.," No. 2, 1887) recording a case of fracture with effusion of blood and aphasia, the hæmorrhage occurring at the opposite side of the injury. In this paper it is stated that fractures of the base may occur at some distance from the point struck. That such fractures are usually seen in the orbital plates, the small wings of the sphenoid and the cribriform plate, and sometimes involving the petrous. These fractures are attributed to contre-coup. It is also pointed out, that aphasia may occur, as in the case cited, without any appreciable injury of Broca's convolution ; this point is of interest should the question of any operation arise.

A fracture implicating the base of the skull usually traverses the middle fossa. The principal symptoms of these injuries are concussion, hæmorrhage (long continued and profuse) from the ear, nose or under the conjunctiva ; an escape of cerebro-spinal fluid from the

ear, nose, or rarely from fissures in the skull; with, perhaps, some signs of injury to the contents of the skull.

In the treatment of fractured base we cannot do much, if anything, to the bones ourselves, and must content ourselves with treating the co-existent cerebral condition and endeavouring to combat inflammation.

Fractures of the skull, serious as they are in themselves, are frequently rendered more so by concomitant injury to the brain, or cranial nerves, or to venous sinuses and blood-vessels, especially the great middle meningeal artery.

In all cases it must be borne in mind that certain secondary lesions may follow, so that the prognosis should always be guarded.

Mr. Pick records a case of successful trephining in a patient aged 16 years, compound depressed fracture, which was followed in 48 hours by paralysis of the right arm. ("L.," vol. i., p. 122, 1887). McGill, of Leeds, has had a case of compound comminuted fracture near the left parietal eminence, accompanied by the escape of brain matter. The patient was quite sensible after the injury, but was drowsy on the next day. Two pieces of bone were removed and a third elevated. On the following day there was right facial palsy followed in two days by clonic facial spasm in frequently repeated attacks, the spasms being 40 per minute. This spread to the arm and leg. The next day the convulsions of the limbs were worse and the patient was exhausted. He was again trephined over the lower end of the left fissure of Rolando, the middle meningeal artery was cut and ligatured. The dura mater was opened but nothing found. The convulsive attacks persisted for the next ten days, but the patient gradually recovered, and went away cured on the forty-second day after the accident. ("L.," vol. i, p. 774, 1887). Mr. McGill attributes the improvement in this case to the relief of tension, and thinks that there must have been some changes in the cortex near the trephine opening, although nothing was actually found. Besides these two cases many others of fractured skull have been reported during the year. Among these, one under the care of Mr. Godlee is of unusual interest. ("B. M. J.," vol. i., p. 675, 1887). A boy, aged 15, was thrown from a runaway horse, striking his forehead and both knees. For 28 hours there were no symptoms, then delirium and high fever suddenly set in; 18 hours later he was speechless and unconscious. T. 105°, P. 120, R. rapid. There was redness over the forehead like erysipelas, and the left knee contained fluid. The next day meningitis was diagnosed. Death occurred six-and-a-half days after the accident.

On the fourth day there was incomplete paralysis and rigidity of the right arm, and on the day of death it affected also the right side of the face and upper lid; the lower limbs were normal. The bruising had increased and an abscess seemed about to point.

The diagnosis made was meningitis, acute septicæmia with an apparently simple fracture of the skull.

At the *post-mortem* an abscess was found on the forehead communicating with a piece of bare bone at the junction of the upper and inner walls of the left orbit. Extensive meningitis, especially on the left side, and here extending along the fissure of Rolando over the cortical centres of the face and upper limb. Brain uninjured. There was a small fissured fracture running along the left fronto-ethmoidal suture communicating with the posterior ethmoidal cells which contained pus, as did also the right ones and the sphenoidal sinus. The fluid in the left knee joint was also purulent.

Mr. Godlee thinks that this fracture may have been compound through the ethmoidal cells, and the infection occurred through the buccal mucus. And it is possible that the specific poison was due to a previous disease which the boy had caught from a horse. Mr. Godlee also suggests that the case may have some analogy with that curious condition of system preceding acute necrosis, when any extravasation suppurates.

Hernia Cerebri.—Hernia cerebri is the result of an injury to the skull causing exposure of the membranes and brain. It may result immediately, or later on, as a consequence of the injury, or at a remote period from the giving way of a cicatrix. It is especially seen in the vault, and parietal and frontal regions. It is more common through small holes than through large ones, probably because the large space allows the free expansion of the brain.

Hernia cerebri is more usually met with in children than in adults. The prognosis is decidedly bad and the treatment most unsatisfactory. Dr. Maclaren brought a case before the Clinical Society, on March 12th, in which there had been a hernia cerebri successfully treated by means of pressure, with a silver plate made to fit the opening in the skull. The patient, aged 26, had sustained a compound fracture of the skull, and becoming comatose and much worse on the nine days succeeding the accident, the scalp wound was enlarged and fragments of bone removed, some of which were embedded in the brain substance. The resulting hole in the skull measured 3 by 1 inches, and was situate in the left anterior temporal region. There was right-sided paralysis. A fortnight later, the general condition had much

improved, but there was a hernia cerebri. This was removed and a rolled-out florin was placed inside the skull to block up the opening.

Nineteen days later it again protruded, owing to the plate having slipped away. This protrusion was cut off and the plate re-adjusted and fixed with wire sutures. The scalp was then drawn together over all, and the plate was left *in situ* for two months. On its removal the wound healed well.

Mr. Mackellar ("Lancet," vol. i., p. 2020, 1887), has also met with a case in a young girl, aged 2 years, who had a punctured fracture of the left frontal eminence, caused by a nail projecting from a piece of wood which fell upon her. The wound was enlarged and fragments removed, and the brain found protruding.

Unfortunately the child died from an attack of diphtheria on the 54th day after the accident. At the *post-mortem* it was found that the cerebral condition had almost quite healed.

SLEEPLESSNESS. (See "Insomnia.")

SMALL POX. *Alexander Collie, M.D.*

Whenever this disease arises, the propriety of vaccinating or re-vaccinating all who have been in contact with it should be considered, because by this means its spread may be arrested. Modified small pox requires no special treatment, and in the hæmorrhagic none is of any avail, but the depression may be relieved by some form of **Alcohol**, and in the writer's opinion the best is champagne. In confluent small pox, the restlessness, the delirium and the thirst demand treatment. For the first, light coverings, a medium temperature, say 50° F., and **Vaseline** or oil to relieve itching, and if the oil or vaseline irritate, **Opium** should be given in full doses; for the second some form of **Opium** or of **Alcohol**; but generally sedatives should not be given when there is much salivation, and for the thirst small pieces of **Ice** should be placed in the mouth and allowed to dissolve there. The eyes should be closely observed, and treated as occasion may require. Boils and abscesses should be looked for, and opened when found. Laryngitis occasionally arises, and when it does the patient may be placed in a tent bed with or without steam, and when there is distinct "distress" in breathing, trachæotomy should be performed. For the prevention of pitting, no remedies have yet been found.

SPERMATORRHŒA. (See "Cypripedium," p. 45; "Hammamelis," p. 58; "Ichthyol," p. 66).

SPINAL DISEASES. *Robt. Jones, M.D.*

Infantile Paralysis.—Dr. R. N. Wolfenden calls attention to a disease resembling this, which is described by Heine as hemiplegia

cerebralis spastica, and by Strümpell poli-encephalitis acuta. The age in forty recorded cases was under three years in nineteen, thirty-four were under four years, and only six over four. The attack is ushered in by convulsions, complete hemiplegia follows, sometimes monoplegia, rarely paraplegia; the muscles never exhibit electrical degenerative actions, athetosis supervenes, and in most cases permanent mental defect. With regard to the etiology little is known: heredity, measles, scarlet fever, and dentition are recorded as causes. The prognosis as to partial recovery of the affected side is good. There is always some impairment of power, and impaired development of the affected side. The pathology is involved in some obscurity; beyond an affection of the cerebral grey cortex little is known of it. Gowers attributed the sudden hemiplegia of children, to thrombosis of the longitudinal sinus, or veins opening into it, causing induration and shrinking of the cortical areas. Whether it be inflammatory, embolic, thrombotic, or due to hæmorrhage is at present unknown. Wolfenden regards it as an inflammatory affection of the motor cells in the cerebral cortex resembling acute spinal paralysis. The treatment comes under that of the later stage, **Cod Liver Oil** and tonic treatment being indicated. The constant current may improve muscular nutrition. When the intellect is affected, careful educational supervision will direct the weakened faculties into a useful channel.

Spinal Paralysis.—It appears that the so-called Thomsen's disease, called by Strümpell "Myotonia congenita," and by Eichkorst "Primary spinal muscular spasm," a tetanic contraction of groups of muscles, so that the sufferer is unable to move any part of his body that may be affected, whether legs, arms, jaw, or trunk. This anomaly is usually congenital, and has been described by Westphal as an affection of the muscle tonus. It occurs most frequently at the commencement of voluntary action. Sensibility and tendon reflexes are normal; the electrical re-action is always augmented. No special treatment is of any avail, and the disease is stated to have a central origin.

Progressive Muscular Atrophy.—MM. Landouzy and Déjérine have described certain facial characteristics of this disease, in which both lips are generally thickened, the upper overhanging the lower (like a tapir's, Westphal remarks), with unequal powers of movement at the corners of the mouth, and there is an inability to close the eyes. They consider this of some importance in diagnosis, as it may appear early in the disease, before other manifestations.

Locomotor Ataxy.—The pains of locomotor ataxy are stated by M. Raisin to be greatly relieved by **Ether Spray** or **Ethyl Bromide**

Spray over the spinal column, or directed so as to refrigerate the seat of actual pain. This method, practised at the Salpétrière Hospital for some length of time, is said to cause general improvement in the state of the patient. Dr. Suckling recommends the use of **Antipyrin** in 10 grain doses, having administered it with marked relief to a patient rarely free from pain for twelve months. On the other hand M. Babinski records three cases from M. Charcot's clinic, where complete recovery took place, although after many years.

The so-called tabetic arthropathy has recently received fresh interest from Virchow's careful examination, in which he acknowledged the similarity of the affection to rheumatoid arthritis, and traced the development of the changes from hyperplasia of the cartilaginous investment, followed by retrogressive changes and atrophy, ossification of the medulla leading to eburnation, hyperplasia, and ossification of synovial fringes, and ultimately of ligamentous tissue. These changes, although dependent upon disordered nerve influence, he maintains are determined by local causes. He objects to the phrase "tabetic," and prefers that of "arthropathia tabidorum."

Ataxic Paraplegia of Gowers is said to be a comparatively common disease, appears in both sexes, though more frequent in men. No definite cause has been assigned beyond cold, mental distress, concussion of the spine, etc. In all the fatal cases some sclerosis of both posterior and lateral columns was present. Treatment is that common to all chronic diseases of the spinal cord, the avoidance of all supposed causes, prolonged rest, small doses of **Mercury** and of **Arsenic**; but the majority of cases progress steadily to a fatal issue, although the end may be prolonged for many years. Two main signs may be said to characterize this disease, viz. : weakness and ataxy. Lightning pains are absent, the knee jerk is increased, and there is clonus ; the pupil also acts to light. Sensation is normal, no muscular wasting, nor electrical changes.

Disseminated Sclerosis.—In a very interesting address, Dr. Bristowe discusses the affinity between this disease and locomotor ataxy ; also between it and general paralysis of the insane, laying stress upon the affection of speech and the mental side in the latter, and the "crises gastriques" in the former, shewing how also they are all related in the common ground of ataxia, tremors, and epileptiform convulsions. He suggests, however, no new treatment.

Paralysis Agitans.—Under this heading may be included that curious form of nodding spasm described by Henoch and Stephen Mackenzie, consisting of a nodding of the head forward with a rotatory

movement, accompanied also with nystagmus; they ceased during sleep. It occurs only during the dentitional period of infants, and usually terminates spontaneously, generally after the eruption of a tooth. Treatment should be directed for this purpose.

Night Palsy.—Under this name is described a curious form of paresis coming on in the night, and experienced towards early morning in the form of numbness or tingling of the arms, with pain and loss of power, stiffness, and in some cases actual swelling; the arms cannot be raised to the head, and for a time seem to be quite useless. It occurs in women about the menopause, and more likely in those of a hysterical temperament. Drs. Steavenson, Ormerod, Saundby, Weir, Mitchell and Notley, have described cases and assign theories. Treatment found most remedial: **Bromide of Potassium, Calomel** and **Rhubarb, Tonics,** and **Electricity.** The most unanimous cause in these cases is neurasthenia, or nerve exhaustion.

SPLEEN (Surgery of). *A. W. Mayo Robson, F.R.C.S.*

In serious injury of the spleen, death usually, but not necessarily, occurs from hæmorrhage, as in a case of Mr. Croft's, a drawing of which is given in Sir W. MacCormack's work on "Abdominal Section for the Treatment of Intra-peritoneal Injury," p. 61.

If there be time, the treatment in such a case is by splenectomy. If splenitis or peritonitis supervene on splenic injury, laparotomy may have to be undertaken later on in the case, for washing out the peritoneal cavity, or for the evacuation of abscess of the spleen. In cysts "simple and hydatid," as well as in abscess, the best treatment is by splenotomy, or incision of the spleen, and suture of the wound to the parietes, with drainage. Simple puncture is a less safe method, it having been followed on numerous occasions by serious collapse, and occasionally by sudden death. (See paper by Dr. Davies Thomas at the S. Australian Brit. Med. Meeting, with discussion following, "Brit. Med. Jour.," May 21, 1887, p. 1101).

Splenectomy.—Out of forty-two cases (all the recorded ones) collected by Dr. Podrez, and reported in a paper read in Moscow in January, 1887, only ten favourable results could be found. (See "Annals of Surgery," August, 1887).

The present position of the operation may be summed up as follows: For traumatic lesions, excision is both safe and justifiable. For primary hypertrophy and for movable spleen, the operation may be undertaken if the symptoms are serious, and cannot be otherwise removed. If drainage fail to cure cysts of the spleen, excision may be performed. If malignant disease be diagnosed sufficiently early, the

organ may be removed. Splenectomy for leucocythemic spleen is unjustifiable. For full description of the operation, see "Abdominal Surgery," by Greig Smith, p. 561, 1887 ; also cases of splenectomy by Mr. Knowsley Thornton, "Lancet," 1886, vol. 1, p. 854."

STOMACH DISEASES (Organic). *Alfred G. Bateman, M.B.*

(Functional Disorders, see "Dyspepsia ;" Ulcer of the Stomach, see "Gastric Ulcer.")

Hydrochloric Acid in Cancer of the Stomach.—Dr. Dreschfield has issued an able report on the value of Van der Velden's observations on the absence of free hydrochloric acid in cases of cancer of the stomach. To detect the presence or absence of this acid, the watery solutions of methyl violet, tropœolin, and rosaniline are applied. One part of hydrochloric acid in 4,000 parts of water is sufficient to change the methyl violet solution into a distinct blue colour. Tropœolin solution is changed into a deep brown colour, but is not very constant in its composition. Methyl violet and gentian violet are the most delicate as tests. The application of the test is by no means difficult. If there is vomiting, especially of somewhat clear fluid, not containing blood or undigested food, the vomited matter is filtered, and then the test solution applied ; if the methyl violet shew the re-action we may almost with certainty assume that the case is not one of cancer of the stomach. The gastric juice may also be obtained by means of the flexible tube and is best taken, either in the morning before any food be given, or two or three hours after a light meal. The gastric juice so obtained must then be filtered, and the test applied. The presence of peptones and albumen, and probably some other bodies, such as phosphates, interfere with the test, and no re-action takes place. With another test, however, composed of 0·5 ccm. of unadulterated claret, 3 ccm. of 90 per cent. alcohol, and 3 ccm. of ether, making an almost colourless claret solution, in the presence of minute quantity of hydrochloric acid is speedily rendered a rose colour ; and this, in spite of presence of either peptones or albumen. It is recommended that the experiment should be repeated several times to ensure accuracy of diagnosis.

Condurango Bark was introduced some years ago as a specific for cancer ; after repeated trials, however, it did not stand the test of experience. Lately, however, Dr. Reiss, of Berlin, has tried it in cases of cancer of the stomach, where the organ was primarily affected. In 105 cases where it was prescribed, in all, some good effects were produced. The drug was given every hour—the total amount per diem reaching 10 grammes of the decoction. The

appetite improved in a few days, vomiting and pain diminished, and eventually ceased, and the patient gained in weight. In 64 cases in which a palpable tumour was present, 17 showed signs of diminution, and in 8 quite disappeared. It is claimed, therefore, that condurango has some local influence upon carcinoma of the stomach, and that in all such cases it should be prescribed.

Dilatation of Stomach.—Fatal case after washing out stomach. Mr. Martin reports a case of this nature in a patient of 48 years, who had been in Addenbrooke's Hospital for stricture of pylorus. The stomach was much dilated, and vomiting of sarcinæ in large quantities took place. It was decided to wash out the stomach for relief of these symptoms. Soon after tube was passed the patient became very faint, and it was withdrawn. About two hours afterwards he complained of stiffness of the jaws and inability to open the mouth, and rigidity of the arms, which were strongly pronated and flexed, the thumbs being turned into the palms. The rigidity gradually spread to muscles of trunk and limbs, and temperature rose to 103·4°. He became pulseless and livid, the temperature rising to 107·2° before death, which took place six and a half hours after washing out the stomach. *Post-mortem* examination showed simple pyloric stricture, with scar of old ulcer and a largely dilated stomach. No injury to mucous membrane was found. The symptoms resembled tetanus.

Osteo-malacia, following Dilatation of Stomach. — A case is reported by M. Comby at a meeting of the Société Médicale des Hopitaux of a man aged 66, who presented symptoms of dilatation of stomach. The digestive trouble had existed for years, and the patient showed marked symptoms of rickets. About 10 years before entering the hospital he had suffered from dull pains in the bones, and deformities began to appear. The vertebral column became curved, as also the collar-bones, and bone of one forearm. The fingers were covered with nodosities. It was thought that the lesions of the bones were due to an excessive formation of lactic and acetic acids in the digestive tubes.

REFERENCES.—Dr. Dreschfield ; Dr. Reiss, of Berlin. ("Lancet," March 12th, 1887).

STOMACH (Surgery of). *A. W. Mayo Robson, F.R.C.S.*

The operations performed on the stomach, are gastrostomy, gastrotomy, gastrorraphy, gastrectomy, pylorectomy, gastro-duodenostomy.

Gastrostomy is an operation undertaken for the purpose of establishing a direct opening into the stomach through the abdominal

walls for the introduction of food, when it cannot be passed through the œsophagus. It may have to be performed for fibrous or cancerous stricture ; for obstruction due to growths outside the œsophagus ; for malignant disease of the pharynx or mouth ; or for congenital closure of the gullet.

Before performing gastrostomy for organic stricture, it is of great importance to be certain of the diagnosis (see Prof. Ogston on "The Diagnosis of Stricture of the Œsophagus," "Med. Chron.," January, 1887.)

In a healthy person, food occupies four seconds in passing from the mouth to the stomach, and if the ear be placed three inches below the angle of the left scapula, an amphoric rushing sound is heard when fluid enters the stomach. With one finger on the "pomum adami," with the ear in the situation mentioned, and with a watch in the other hand, it will usually be found, when there is stricture of the œsophagus, that fourteen or sixteen seconds elapse before the stomach is reached. This is a valuable addition to the ordinary well-known means of diagnosis. Spasm of the pharynx or œsophagus at times closely resembles organic stricture ; hence, before proposing gastrostomy, an examination should be made with the patient anæsthetised. Mr. Symonds advocates the treatment of cancer of the œsophagus by tubage or permanent catheterism, and in the "Br. Med. Journ.," April 23, 1887, he reports four cases in which he has employed it. Although three of his cases died from ulceration extending to neighbouring parts, life was prolonged in all. He uses a short tube about six inches in length, the upper end being funnel shaped and resting on the stricture. When "in situ" a piece of silk passes through the mouth for the purpose of withdrawing the tube if needful. The tube is to be inserted as soon as solids can no longer be swallowed, and then worn until the case terminates ; but if it cannot be borne, gastrostomy is to be performed.

Although Gross ("Tran. Amer. Surg. Assoc.," vol. ii., p. 363) gives the mortality of gastrostomy for cancerous stricture as 30 per cent., it is undoubtedly higher ; as very many unsuccessful cases are unreported. For fibrous stricture, the mortality according to the same author is also about 30 per cent.

There can be little doubt, that if the operation were performed earlier, *i.e.*, before starvation had weakened the powers of healing, the results would be much better. (For successful cases reported during the past year, see "Lancet," Oct. 8, Mr. R. J. H. Scott ; Oct. 29, Mr. McCarty ; and Dec. 3, 1887, Dr. Murphy ; also "Br. Med. Jour.,"

Nov. 26, 1887, Dr. Gray.) In the "Br. Med. Jour.," May 21, 1887, Mr. Golding Bird discusses the advisability of immediately feeding through the exposed stomach, by means of a hypodermic needle attached to a 2 oz. syringe. In the case under discussion, which died six hours after operation, the puncture was only visible as a small hæmorrhagic spot.

Operation. The incision may be made parallel to, and about an inch from the left costal margin (Fenger); or vertically through the outer edge of the rectus (Howse); or through the linea-semilunaris (Cooper, Forster). The peritoneal opening must not be larger than needful. The stomach may be fixed in the opening by hare-lip pins or by clamps; or by sutures, which may be in a single or double row. Bryant's method, by a double row, seems to be very efficient.

The stomach may be opened at once, or after several hours, or several days, according to the condition of the patient: the opening being made as small as possible. (For operative details see "Greig Smith, Abdominal Surgery," p. 312.)

The after treatment is of great importance. Food, in the shape of nutrient suppositories and enemata, must be administered by the rectum until the stomach is opened. In feeding by the rectum it is advisable to wash out the bowel by a copious enema of tepid water every other day, and thirst may be quenched by giving half a pint of water twice a day by enema. After opening the stomach, about 5 to 10 ozs. of tepid peptonised milk may be given through a catheter, which can then be removed: the process is to be repeated every four hours. Later, more food, and that of a varied nature may be given; but it should always be administered tepid.

Gastrotomy has been performed for the removal of foreign bodies, which having passed into, are too large to pass from the stomach; for the dilatation of the pylorus or œsophagus; and for the removal of a foreign body impacted in the lower end of the œsophagus. In the International Medical Congress, held at Washington, Dr. Maurice H. Richardson read a paper on "The possibility of operation on the œsophagus, through the stomach." He had verified his statement by experiments on sixty bodies, and had in one case operated successfully on a man thirty-seven years of age, who had eleven months previously swallowed a denture of four teeth, which had become impacted at the lower end of the œsophagus. The patient had lost about 50 lbs. in weight, and it was found to be quite impossible to extricate the plate by means of forceps introduced through the mouth.

After the stomach had been opened, the hand was inserted and, on

reaching the cardiac opening the finger discovered the plate about two inches above the diaphragm. By means of digital manipulation it was detached and withdrawn, the stomach being then carefully sutured and the abdomen closed. The patient rapidly gained weight and was soon able to resume his work. (See "Boston Med. and Surg. Jour.," Dec. 16, 1886.) The conclusions arrived at from the experiments related, are,—that the oblique incision below the rib margin is the better; that the stomach, after being withdrawn from the abdomen a little, so as to avoid fouling the peritoneum, should be opened to the right of the convexity of the lesser curve; that the assistant should by traction on the stomach put the lesser curve on the stretch; and that the sulcus so formed is always a certain guide to the cardiac orifice.

When a foreign body is impacted at the cardiac orifice, it is about six inches below the opening made in œsophagotomy, and if it be firmly impacted, and require much force to detach it, the safer plan will probably be to perform gastrotomy and draw it downwards a little way, than to perform œsophagotomy, and draw it forcibly a distance of six inches past very important structures (see "Lancet," Oct. 8, 1887; and "Med. Chron.," Dec., 1887.)

For the removal of foreign bodies from the stomach, gastrotomy has so far proved very successful. Dr. A. C. Bernays ("Medical News," Jan. 1, 1887) describes a case in which, through an incision of five inches in the linea alba, he successfully removed a table knife from the stomach of a man who had swallowed it within an hour previously. The patient was fed by the rectum only, for four days, and afterwards by the mouth. He mentions in the same paper, that out of thirteen published cases of gastrotomy for the removal of foreign bodies, eleven recovered. (See the "Gazette degli. Ospedali" of Feb. 23, 1887.) Prof. Loreta mentions the case of a woman, who, having swallowed needles with suicidal intent, suffered severe pain. Gastrotomy having been performed, some needles were removed from the stomach and others were drawn out of the left lobe of the liver. The patient recovered without a bad symptom, and was entirely freed from her suffering. Mr. Knowsley Thornton ("Lancet," Jan. 9th, 1886) and Schönborn ("Langenbech's Archives," 1883) have successfully removed large masses of hair from the stomach. (For operative details see "Abdominal Surgery" by Greig Smith, 1887, p. 325.)

Loreta's operation of dilating the orifices of the stomach after gastrotomy, in cases of simple stricture, has been attended with marvellous success, considering the severity of the operation. It is intended to replace pylorectomy in simple narrowing of the pylorus, and gastrostomy in simple stricture of the cardiac orifice.

The diagnosis is of great importance, as in malignant disease the operation could do no good. In simple stricture of the cardiac orifice there will probably be a history of corrosive fluid having been swallowed some time previously. The symptoms of pyloric obstruction and dilated stomach will, as a rule, have lasted so long as to exclude cancer; but gastric dilatation may be due to idiopathic gastritis as well as to stricture of the pylorus. Prof. Loreta (see "Br. Med. Jour.," vol. i., p. 373) says, that in mechanical dilatation, the contents of the stomach give an acid reaction, and that no traces of albumen or peptones can be found; whereas in other forms of dilatation, the reaction is neutral or alkaline, and the albuminoids are found unchanged.

Numerous papers on diagnosis have appeared during the past year (see "Berliner Klin. Woch.," Nov. 7, 1887, also "Br. Med. Jour.," June 4, 1887.) Van der Welden holds, that in cancer of the pylorus free HCl. ceases to be secreted by the stomach; none being found if the contents be examined two hours after a meal. Drs. Cahn and Von Mering ("Annals Soc. Med. Chir. de Liegè") assert that HCl. is rarely wanting in pyloric cancer.

Prof. Pelia ("Lancet," 1887, vol. i. p. 840) suggests, that the cancerous stomach secretes a new chemical substance of the nature of an anti-ferment which arrests peptonic action. (For tests for free HCl. in diseases of the stomach see Dr. Nechaieff, "Lancet," June 4, 1887.)

The conclusions which may be drawn from the above papers, regarding the presence of HCl. in gastric cancer are, that as a rule it is absent, but not invariably so. (See "Med. Chr.," March, 1887.)

For the report of a successful case of Loreta's operation, see paper by Mr. Hagyard ("Br. Med. Jour.," Feb. 1887.) For full details of the operation, see paper by Mr. T. Holmes ("Br. Med. Jour.," Feb. 21, 1885.)

Gastrorraphy, or suture of a wound or opening in the stomach, has been performed successfully by Billroth for the closure of a gastric fistula. (See "Wiener Med. Woch.," 1877, No. 38.)

For perforative peritonitis dependent on gastric ulcer, laparotomy and gastrorraphy have been undertaken on several occasions. The symptoms are those of perforative peritonitis, preceded or not, by the signs of gastric ulcer (see Dr. Stewart, "Med. Chron.," Nov. 1887). Dr. Dreschfield ("Med. Chron.," Nov. 1887) advises operation where the symptoms previous to perforation are slight, but where the onset of the acute illness has been quite sudden and severe; for in these

cases, he argues, there will be slight adhesions (if any) and probably a large perforation which would end fatally; but in the more chronic cases he would wait and trust to a spontaneous cure, since adhesions will probably have formed.

In a case of Czerny's, reported in the "Berliner Klin. Woch.," laparotomy was performed on the fifth day after perforation, and the patient died in four days. In some cases of perforation, relief has been given by simple laparotomy with washing out and draining of the peritoneum (see "Wagner Deutche Arch. f. Med.," vol. 39, p. 71; also Dr. Sinclair, "Med. Chron.," Nov. 1887, p. 131; and "Lancet," July 30, 1887, case of obscure abdominal abscess due to perforating ulcer of stomach, by Dr. Miller.)

It does not seem unreasonable to suppose, that if a case of perforating gastric ulcer be diagnosed early, and promptly operated on by laparotomy and gastrorraphy, recovery may occur. In wound of the stomach, Sir W. MacCormack estimates the mortality at 99 per cent. in cases which have not been operated on. Laroche, Carterat, Percy, Travers and Ashby have reported successful examples of suture of stomach after injury. (For report of a case of gastrorraphy in pistol-shot wound of stomach see Dr. Keen, "Journal Amer. Med. Assoc.," 1887). In such cases, laparotomy and gastrorraphy should be performed, the peritoneum being cleansed, and if needful, drained.

Pylorectomy, or partial gastrectomy and enterectomy, has been undertaken for simple as well as for malignant disease: it will probably be limited in future, to cancer of the pylorus.

A contra-indication to the operation is marked fixation with irregularity of the surface of the tumour, accompanied by considerable dilatation of the stomach.

Mr. McArdle ("Br. Med. Jour.," vol. i. 1887, p. 733) reports, that of 1342 cases of cancer of the stomach, the disease was confined to the pylorus in 802; and that of this number 496 were suitable for operation, there being no extension to neighbouring parts.

Of 70 cases of pylorectomy which have been collected, 62 were for cancers, with 35 deaths; whilst 8 were for simple stricture, with 3 deaths.

Von Hacker ("Arch. f. Klin. Chir.," xxxii.) shows that the results after pylorectomy depend very much on the extent of adhesions. In Billroth's Clinic, out of 15 operations, 7 had succeeded, but in all the cases where adhesions were extensive, death had occurred in from ten to thirty hours. (For details of operation, see "Billroth's Clinical Surgery," or Southam, "Br. Med. Jour.," July 29, 1882.)

Gastro-enterostomy (G. duodenostomy or G. jejunostomy) is an operation undertaken for the establishment of a permanent fistula between the stomach and bowels, in cases of obstruction of the pylorus, where pylorectomy cannot be performed, or where Loreta's operation is unsuitable, In cancer, it is only a palliative measure, but in simple stenosis it may produce a cure.

Of 9 operations in Billroth's Clinic, 5 died and 4 recovered. Out of 18 reported cases, 12 died.

Hahn, ("Beilage Zum. Centralblatt. f. Chir.," 1877, No. 25, p. 56) reports a case in which he had performed gastro-enterostomy for cancer of the pylorus two years previously, the patient being then alive.

Mr. A. E. Barker reported a successful case, with full details of the operation, in the "Brit. Med. Jour.," Feb. 13, 1886; and in the Journal for April 9, 1887, he gives the sequel of the case.

Billroth (see "Annals of Surgery," vol. ii., 1885) has performed gastro-enterostomy as a preliminary to pylorectomy.

Gastrectomy has been attempted once, but the patient died on the table: it is questionable whether the operation is feasible or proper. For details of case, see Dr. Connor, "Philad. Med. News," Nov. 1884.)

STRABISMUS. *Wm. Lang, F.R.C.S.*

The treatment of convergent squint as well as its etiology was the subject of an exhaustive discussion at the Dublin meeting of the British Medical Association.

The treatment pursued by the present writer represents the views of the majority of the speakers. It is to atropise both eyes for a week, or longer, till the ciliary muscle is completely paralysed. Then to order the glasses which fully correct the ametropia. These glasses are to be worn constantly, and it is always well to continue the use of the atropine until the glasses are ready for use.

The easiest and most accurate method of ascertaining the refraction in young children is by retinoscopy; care must be exercised in covering the eye that is not under examination, otherwise the patient will not look at the sight-hole of the mirror with the squinting eye, and in that case the refraction of some part of the fundus other than the yellow spot will be ascertained, a useless result.

If the case has come under treatment directly after the appearance of the squint the chances of recovery by the use of glasses alone is very good. Therefore, the greater the length of time that a squint has remained untreated the more likely is it to require operative interference to effect a cure. Parents should, therefore, be impressed

to bring these cases at once, and not taught to wait for the child "to grow out of it." As the squint, in the vast majority of cases, depends on an error of refraction, it is well to examine the other children of the family and correct any hypermetropia; in many cases a squint can thus be obviated.

The amblyopia which is so commonly found in the squinting eye may be treated by appropriate exercise, whether it be considered to be the cause, or the consequence of the squint. The simplest plan is to place a piece of thin card-board between the spectacles and the non-squinting eye for twenty minutes two or three times a day, either during meal times, or whilst reading large print.

If the case comes under observation before the age of three it may be necessary to postpone the use of glasses; meanwhile the non-squinting eye may be tied up two or three times a day, so as to exercise the squinting eye; and from time to time **Atropine** may be used for two or three days, so as to paralyse the ciliary muscle and to allow the internal recti to relax; this treatment must be continued till the glasses are worn.

Mr. Snell advocates making the incision in the conjunctiva along the upper instead of the lower border of the muscle; he asserts that the scarring is less.

Landolt drew attention to the results he had obtained by the use of the stereoscope and Herring's test, in endeavouring to restore binocular vision in some cases where the vision in the squinting eye was very defective. It is generally considered that the surgeon's duty is at an end when the obvious squint is cured, but until binocular is restored the patient is in no better condition, visually, than before the division of the shortened muscle. The conscientious surgeon must therefore educate his patient so that the chief use of our possessing two eyes may be gained.

Advancement of Recti.—The methods for advancing one of the recti are already sufficiently numerous; the following, however, devised by Mr. Richard Williams, of Wigan, is very simple, and can be carried out in the majority of cases under the influence of **Cocaine.**

A horizontal incision is made through the conjunctiva over the centre of the insertion of the rectus, extending from close to the corneal margin towards the canthus. The muscle being raised on a strabismus hook, or better still, by a Prince's clamp strabismus forceps (to be obtained at Messrs. Weiss'), is given into the hands of an assistant.

A needle, armed with a stout suture, is now passed through and

underneath the conjunctiva and sub-conjunctival tissue, entering at a point about the sixth of an inch above the corneal end of the incision, and emerging close to the muscle in the wound. It is next passed transversely through the muscle from the upper to the lower edge at right angles to the course of the fibres, close to the tendon. The needle is now passed under the conjunctiva and brought out at a point below the incision corresponding to the point of entrance. The tendon is next divided, and after the tenotomy of the antagonist, the two ends of the suture are tied sufficiently tight to produce the desired effect. ("B. M. J.")

Ocular Paralysis.—In a case of paralysis of the motor-oculi of many months' standing, where the usual treatment had failed, Spalding cocainised the eye, seized the conjunctiva over the insertion of the affected muscles and rotated the eye as far as possible in the direction of action, alternately, of the affected muscle and of its antagonist. This treatment was continued for two minutes daily for a week, then twice a week for two weeks more. A complete recovery ensued.

SYCOSIS NON PARASITICA. *N. Whitelaw Bourns, M.D.*

A peri-follicular inflammation, usually occurring on the chin, cheeks, or upper lip, and not to be mistaken for *Tinea Sycosis*. In the latter affection, the parts are more irregular, nodular, and tuberculated; the hairs are broken; the stumps may be extracted without causing pain; and under the microscope the fungus is easily demonstrated.

The treatment of sycosis is chiefly local. If the parts are much inflamed, soothing applications are called for, with poulticing; the hair to be clipped; and if shaving can be tolerated, it must be performed twice a week, or even daily in some cases.

Duhring uses 15 to 30 grains **Calomel** to the ounce of **Oxide of Zinc**, or **Petroleum Ointment**. Ten grains of the **Red Oxide of Mercury** in an ounce of **Lanolin**, makes an admirable application.

Bulkley gives the following ointment:

℞ Olei Rusci	ʒss to ʒj	Unguenti Aquæ Rosæ ad.	ʒj
Unguenti Hydrarg. Oxidi Rub.	ʒj to ʒiij	M. Ft. Ung.	

Authorities differ as to the necessity for the extraction of the hairs.

SYPHILIS. *J. Hutchinson, Jun., F.R.C.S.*

The question of marriage and syphilis has been exhaustively discussed by Prof. Fournier in his admirable monograph, and Morrow in a recent article comes to practically the same conclusions. Special considerations, such as the severity of the attack, may cause excep-

tions to any general rules, but the following may be taken as orthodox teaching on the subject.

(1,) If the case has not been a severe one, and has been treated with **Mercury** for a considerable time, it is safe for the patient to marry from three to four years after his primary disease, provided that from 18 months to two years have elapsed since any symptoms showed themselves.

(2,) If the above rules as to time have been obeyed, but no efficient course of treatment has been followed, marriage should not be advised, but may, nevertheless, be undertaken without grave risk.

Syphilis and Cancer.—Lang, of Vienna, reports two cases of syphilitic lesions of the mouth (under surface of tongue and lower lip) which passed on into cancer. It is in the tongue that this transformation is most often met with, and the importance of its recognition cannot be too strongly impressed. Only too often an epithelioma in a patient who admits syphilis, and who, perhaps, presents scars of syphilitic sores on other parts of the tongue, is treated with **Iodide of Potassium** until all chance of a successful operation has been prevented. The risk attending removal of half, or even the whole tongue, is now so slight that in any case which is on the border line and in which suspicious induration accompanies an old syphilitic lesion of the tongue, and resists a short course of specifics, the operation should be advised. It must be remembered that in Butlin's test (the microscopical examination of the scrapings from the ulcer) we have a most valuable aid to exact diagnosis.

Peripheral Neuritis in Syphilis.—Ehrmann reports a case of neuritis of several nerves of one arm, namely the ulnar, median, and musculo-cutaneous, in a patient who was suffering from other secondary syphilitic symptoms. Some of the muscles supplied by the affected nerve were becoming atrophic; but great improvement followed the use of **Iodide of Potassium.**

Some of the rarer results of Inherited Syphilis.—Mr. R. W. Parker shewed at the Pathological Society, May 4th, 1887, a specimen of tracheitis and bronchitis from a boy with congenital syphilis, the inflammation having led to almost complete closure of the air-passages. The lungs had become affected with secondary bronchiectasis.

Dr. Santiotis reports two cases of multiple subcutaneous abscesses in infants who also presented characteristic syphilides. In one case death resulted, the other recovered after the prolonged use of **Mercury**. Whether the abscesses (which were quite unlike gummata

and were rather of the phlegmonous form) were directly dependent on the syphilitic virus or not, may be doubted.

Drs. Warner and F. Beach have drawn attention to the occurrence of chronic meningitis and dementia from inherited syphilis, the case reported bearing out Heubner's statement, that an hereditary predisposition to mental diseases co-exists with the syphilitic taint.

It has been pointed out by Mr. Clutton that in some cases of inherited syphilis the knee-joints are affected with a chronic form of inflammation, which tends to subside spontaneously, and which is, as a rule, accompanied with hardly any pain. In fact, not infrequently, the patient continues to walk about during the course of the disease. I have observed upwards of ten cases of this complication; and, as in Clutton's cases, the patients all had suffered from interstitial keratitis. Dr. Armstrong reports a remarkable case of the latter in a boy, aged nineteen, who developed effusion into the knees, ankles, wrists and elbows. The effusion was rapid, and accompanied by some fever; in these respects it was so unusual that it may be doubted whether rheumatic fever was not really the cause of the synovitis.

Treatment of Syphilis. Hypodermic Injections.—A good deal has been heard of late of this method. Mr. Astley Bloxham ("Lancet," Aug. 26th, 1886) has treated a very large number of cases by weekly injections of one-third of a grain of **Bichloride of Mercury** into the gluteal muscles. Only about thirty injections are made in all in each case, the solution being one of six grains to the ounce. The needle is liable to become brittle from the action of the mercury, and requires to be renewed from time to time.

Several continental surgeons have proposed substitutes for the sublimate with a view of obtaining more gradual absorption and of avoiding local inflammatory phenomena. Thus Scarenzio employed calomel, but Kopp and Chotzen admit that this drug sometimes causes abscesses. Trzcinski and Schadek have largely used the **Yellow Oxide of Mercury,** suspended in a gummy solution, injecting about a grain every ten days. The former author reports ninety cases so treated, the fact that the mercury is absorbed is shewn by its detection in the urine within 48 hours, as well as by its effect on the secondary symptoms. This method of treatment by subcutaneous injection is by no means painless, and unfortunately (as Dr. Letnik has proved) the combination of cocaine with the mercurial preparation has little effect in preventing the pain.

Jullien, Kölliker, and Von Sigmund endorse the **Calomel** injection method, but it is admitted that relapses occur as often under this

treatment as when the mercury is given by the mouth. It would seem, however, that our views as to the amount of mercury required in the treatment of secondary syphilis need some modification, as it is claimed that eight grains of calomel are sufficient in most cases when used hypodermically, although the treatment may be protracted during a year.

The modern preparations for the internal administration of mercury include the **Tannate** (Lustgarten) given in doses of 1½ grains, and the **Carbolate** (Camberini) in pills, containing 2 centigrammes. Their advantages over the familiar grey powder are very problematical.

Primary Chancres.—It is now generally admitted that when a patient comes under care with an indurated chancre it is useless to attempt to prevent systemic infection, by excising the ulcer. Prof. Neumann ("Bull. Gén. de Thérap.," Feb. 15th, 1887) confirms this view, and endorses the teaching that, as soon as induration is well-marked, it is advisable to begin the regular administration of **Mercury.** This does not, of course, affect the question which occasionally arises of excision of an excoriation, or small sore, observed soon after suspicious intercourse, but here obviously the data are too doubtful to admit of positive evidence.

Dr. W. E. Cant confirmed the comparative infrequency of definite induration in primary chancres in the female sex. In one-third of his total number of cases it was doubtful whether any induration was present. (See "Trans. of Med.-Chir. Soc." for 1887.)

M. Fournier records the case of a large phagedænic ulcer of the groin which was followed by the usual secondaries, and which was rapidly cured by the local use of **Iodoform,** and the internal administration of **Proto-iodide of Mercury.**

Chancres in unusual positions.—Rare cases, such as the following, are worthy of record, since mistakes in diagnosis are very readily made when a chancre is found in an unusual site, the most common error being made in ascribing the lesion to epithelioma. Not a few cases have been described of chancre of one eyelid, and Dr. Tepliaskin reports no less than eight cases occurring in a Russian village, due to the patients allowing their eyes to be licked by a woman for some imaginary ailment. M. Hérard treated a primary chancre of the nipple in a man due to a similar source of contagion, whilst Dr. Guranovski reports an extraordinary example of phagedænic ulcer of the eustachian tube and adjoining parts, which was ascribed to infection from a chancre of the genitals, the patient being in the habit of taking snuff.

Dr. Tchudnovsky reports the case of an infecting chancre on the chin, which was attributed to contagion received in a barber's shop.

Syphilis of the Brain.—Disease of the cerebral vessels, particularly of the basilar and middle-cerebral arteries, is not infrequently directly due to syphilitic changes in their walls. Aneurisms (often multiple) are thus produced, of these M. Spillman reports twelve cases. The narrowing of the vessels may lead to more or less complete hemiplegia, and a case reported by Dr. C. Allbutt may probably be referred to this cause. A lady, aged 50, who had had syphilis, suffered from repeated attacks of coma, accompanied by partial hemiplegia, but ultimately recovered. **Iodide of Potassium** was apparently of much use in affecting the cure.

In most cases of paralysis of the oculo-motor nerves anti-syphilitic treatment should be thoroughly tried, provided the disease is of fairly recent origin. As proved in one of Mr. Hutchinson's cases of ophthalmoplegia, the central origin of the nerves was affected. Mr. Hutchinson, Jun., brought forward at the Ophthalmological Society, this year, evidence to shew that in some (particularly the unsymmetrical cases) syphilitic inflammation about the cavernous sinus was the cause. In one patient this was fully demonstrated *post-mortem*, and in several others specific treatment had been attended with the best results.

TESTICLE (Diseases of).

The general treatment of diseases of the testicle was fully considered in the "Medical Annual, Dictionary of New Treatment," 1887, p. 376. Mr. Gerard Smith's communication respecting the value of **Pulsatilla** in acute orchitis and epidymitis is referred to on p. 84.

TETANUS. *W. H. Elam, F.R.C.S.*

M. A. Verneuil has advanced the proposition that tetanus is an infective disease, caused by inoculation of a specific septic substance, and that this specific septic substance is probably derived from horses. He has collected nearly 200 cases, most of which tend to prove that the virus is communicated from the horse to man, and may be communicated from man to the horse, and from man to man. His enquiry is certainly a most important one, and throws new light upon this formidable disease. (*Vide* "Revue de Chir.," Nov. and Dec., 1887).

Drs. Carle and Rattone inoculated rabbits with an emulsion prepared from the wound of a man who died from tetanus. Each case of inoculation was followed by death of the rabbit from tetanus, and on inoculation of other rabbits by an emulsion prepared from the sciatic nerve of those rabbits which had died from tetanus produced

tetanus also. The writers conclude that human tetanus is an infectious malady transmissible from man to rabbit, and from rabbit to rabbit. (*Vide* "Giov. del. Acad. de Med. di Tornid." Fusc. 3).

Paul Wagner ("Deut. Zeit. für Chir.," Bd. 23, S. 542) has also published an interesting paper on this subject. It has always been asserted that cold predisposes to tetanus. The observation dates back to the time of Hippocrates, and refers rather to climateric conditions. Lappey, in his account of the Austrian campaign of 1809, wrote: "The wounded who were most exposed to the cold damp air of the chilly spring night, after having been subjected to the quite considerable heat of the day, were almost all attacked with tetanus." It has not, however, been recognized that tetanus is peculiarly frequent after frostbite, and under these circumstances Wagner's communication will cause some surprise. Between January, 1879 and March, 1886, 164 patients with frostbite were admitted into the surgical clinic at Leipzig. Of these, no less than five—a percentage of 3·4—died of tetanus. The percentage of tetanus observed among the entire series of cases during the period named was only 0·096.

Wagner's statistics further show that only fifteen cases of tetanus were met with in the seven and one-quarter years, so that in no less than one-third of the cases the cause of the disease was—or appears to have been —frostbite. In three of these cases the frostbite was only of the second degree. In the rest it was severe. This communication affords still further support to the view that tetanus depends not upon any spreading neuritis or neurosis, but upon some blood poisoning. Such poison may take the form of ptomaines developed in putrefying parts about a wound. In frostbite this condition would be amply provided for. Most surgeons must have been struck with the fact that in traumatic tetanus the wound is generally foul or sloughing, even though it may be small.

Wagner cites one case especially that bears upon the theory of blood poisoning as a cause of tetanus. In this patient hæmoglobinuria appeared during the last two days of life. The occurrence of this symptom in such recognized blood affections as scarlet fever, typhus, and malaria is well known.

TREATMENT.—Brunäuer, in "Pester Med. Chir.," Presse No. 11, publishes notes of a case of rheumatismal tetanus cured by **Pilocarpine.**

Morphine subcutaneously injected has been found beneficial. Bromated and iodated preparations were also practised. Preparations of **Zinc** have been recommended, and **Salicylic Acid** has its advocates also.

Lopez, in "El Gen. Med. Quir.," relates a case of imminent death from tetanus relieved by mixed hypodermic injections of **Morphine** and **Cocaine** (each 5 per cent.) with immediate good effect, the patient, previously for three days under morphine, though becoming more rigid and finally unable to swallow, was relieved in two hours.

Falconer Murison relates a successful case of tetanus treated with subcutaneous injection of **Morphine.**

Cannabis Indica in full doses, and **Ice** to the spine are recommended.

TINEA CIRCINATA—Ringworm of the Body } **Trichophyton**
TINEA TONSURANS—Ringworm of the Scalp } **Tonsurans.**

N. Whitelaw Bourns, M.D.

Ringworm of the body rarely gives rise to much trouble, while tinea tonsurans is a most troublesome affection, not infrequently ending in the patient's friends getting dissatisfied with the practitioner in attendance, and so the case is lost sight of.

To insure a satisfactory termination of any case of ringworm of the scalp, the following instructions must be carefully carried out :—

(1,) The hair must be closely clipped or shaved.

(2,) The head must be frequently washed with soft soap and water.

(3,) A cap of oil silk or linen constantly worn, a new one supplied once a fortnight.

(4,) All brushes and combs used by the patient must be destroyed, as well as the bonnet or hat in use, before coming under treatment.

(5,) The application to be thoroughly applied.

(6,) The patient's general health to receive careful attention.

Dr. Thin says "there is no fixed formula for every case of ringworm." He usually begins by using a **Sulphur Ointment,** 1 drachm to the ounce, with applications of the **Tincture of Iodine,** or a lotion of **Carbolic Acid** in **Glycerine,** 1 in 8, with the best results in young children. He also speaks highly of **Citrine Ointment,** the strength being proportioned to the age of the patient. He points out the dangers attending the use of a strong solution of perchloride of mercury from absorption of the drug, also the danger of baldness resulting from the application of croton oil. ("The Practit.," Ap., 1887.)

Mr. Alder Smith advises the following :—

℞ Hydrargyri Oleatis (Dr. Shoemaker's)	℥ss	|	Adipis Benzoati M. Ft. Ungt.	℥v

Dr. Carafy recommends a solution of **Boracic Acid,** 20 grains to

the ounce of **Alcohol**, to which a drachm of **Ether** is added. To be thoroughly rubbed in three times a day.

Mr. Coster uses the following, saturating the part with a piece of sponge :—

℞ Iodini pur. ʒij | Ol. Picis (Sp. G. 853) ʒj
M. et solve.

The iodine and oil are to be gradually and carefully mixed, otherwise heat is generated, and the iodine dissipated.

Dr. James Foulis uses **Oil of Turpentine**, rubbing it into each patch for two or three minutes until smarting is complained of, he then washes the scalp with **Carbolic Soap** and water, which soon relieves the smarting. The head is then thoroughly dried, and two or three coats of **Tincture of Iodine** painted over the parts affected. When the hair is dry he applies **Carbolic Oil** (1 in 20) to destroy any spores that may be there. "This treatment (he says) applied every morning, or morning and night in very bad cases, cures the worst cases in the course of a week."

TINEA FAVOSA (Favus)—Achorion Schonleinii.

N. Whitelaw Bourns, M.D.

Is characterized by the presence of light yellow cupped crusts, emitting an odour resembling cats' urine, or mice. The disease may be found on any part of the body, but the scalp is its usual *habitat*, and by scratching may be transplanted to under the nails.

THE TREATMENT resolves itself into removal of crusts, depilation, and the use of parasiticides. Those most used are **Bichloride of Mercury**, 4 or 5 grains to the ounce ; preparations of sulphur, as the **Hyposulphite**, and Shoemaker's **Oleate of Mercury Ointment.**

TINEA SYCOSIS (Trichophyton Tonsurans).

N. Whitelaw Bourns, M.D.

Found on the face, particularly attacking the chin, hence the name so often applied, "Sycosis Menti."

THE TREATMENT consists of depilation, which is of the first importance, and the application of parasiticides, as a **Corrosive Sublimate Ointment or Lotion**, 2 or 3 grains to the ounce ; **Sulphurous Acid**, pure or diluted ; or a lotion of the **Hyposulphite of Sodium**, a drachm to the ounce.

The prognosis must be guarded, as relapses are liable to occur, and occasionally the hair follicles are destroyed, leaving patches of alopecia.

TINEA VERSICOLOR (Microsporon Furfur).

N. Whitelaw Bourns, M.D.

Hublé found that when the dry scales from a case of tinea versicolor were placed upon the skin and kept in position for thirty days with

India rubber paper, there was no result. But when the skin was first rubbed and scratched until it was red, glycerine applied, and the scales bound on with India rubber paper, the patch was found to have spread, and to be loaded with fungus, when examined after forty days. He points out that Köbuer alone had hitherto succeeded in producing the disease by inoculation. ("Viertelj. für Derm. et Syph.," 1887, Heft 2, Halfte 2, p. 595).

TREATMENT.—A lotion of **Bichloride of Mercury,** 3 grains to the ounce of water, or of **Hyposulphite of Soda,** 2 drachms to the ounce, applied twice a day, is all that is necessary.

TROPHONEUROSIS OF THE SKIN. *N. Whitelaw Bourns, M.D.*

As the result of careful study of the "Relations of the Nervous System to Diseases of the Skin," Kapp gives the following conclusions :—(1,) It may be regarded as proven that the nervous system under normal conditions exercises a controlling influence over the nutrition of the various tissues which go to make up the skin, and that organic and functional alteration of the central and peripheral nervous system, may produce as a result disturbance in the normal nutrition of tissue, irrespective of any vaso-motor disturbance. Our knowledge with regard to the minute details of these processes is incomplete, but in general it may be assumed that mere cessation of innervation gives rise to atrophic processes, while irritation of the nervous system is more apt to cause dystrophic processes in the tissues affected. (2,) It is most probable that this trophic influence is exercised by certain ganglion cells and groups of ganglion cells situated in the central nervous system, a normal condition of these cells being necessary to the normal production of nutrition. Nothing positive, however, is known concerning the exact situation of these trophic centres. Those which govern cutaneous nutrition are probably situated in the posterior region of the spinal cord, although they may exist in the ganglion of the posterior nerve-roots. (3,) It is not probable that there are special nerve-fibres devoted to the transmission of trophic influence, but that this peculiar influence is transmitted by means of the ordinary nerve-fibres. (4,) There are but few affections of the skin which can be regarded as uncomplicated trophoneuroses. These are hemiatropia facialis progressiva, herpes zoster, pemphigus, scleroderma, and the anomalies of cutaneous secretion. (5,) Most of the other cutaneous affections usually regarded as trophoneurotic in origin, are to be regarded rather as the result of several different processes, among which trophic disturbance plays a more or less important part. In general, as a consequence of disturbed trophic influence is to be

assumed a diminished capacity of tissues to resist pathological changes ; nevertheless, there doubtless, also, occur instances in which the trophic influence seems to be stimulated, and thereby the capacity for resistance and growth of tissue is temporarily at least increased. (6,) The essential reasons for the assumption of a trophic influence which resides in the nervous system are derived from clinical observation. ("Boston. Med. and Surg. Reporter," 1886).

Tilden reports a case of nerve injury which was followed by peculiar cutaneous symptoms. The wound, seated at the wrist, healed satisfactorily. Several days after the injury there developed a progressive loss of tactile sense, and a numbness of the fore and middle fingers. Some days later, and subsequently at intervals of a few weeks, on the same parts, pea-sized, tense bullæ, with clear serous contents, appeared. The bullæ develop rapidly, without subjective symptoms, upon a slightly reddened base, and, once formed, do not increase in size. On removal of their covering is seen a superficial excoriation which soon disappears. When several such lesions have appeared on the same spot a condition of tylosis is brought about. One of the bullæ, the largest noted, gave rise to an ulcer, which subsequently was transformed into a crater-like callus, the thickened epidermis being arranged in concentric rings around the crater, which presented a small blood-crust covering an excoriation. The skin over the fingers named is tense, whitish, of a glossy texture, and on palpation the tissues seem to be more resistant and less elastic than those of the uninvolved fingers. The nails were not implicated. The application of the faradic current relieved the symptoms considerably while under treatment, but the improvement was not permanent. ("Journ. Cut. and Ven. Dis.," 1886.)

TYPHOID OR ENTERIC FEVER. *Alexander Collie, M.D.*

There are two considerations which determine the treatment of Enteric Fever.

(1,) The condition of the intestine.

(2,) That of the general system.

These two factors vary independently and so indefinitely that it is impossible to dictate precise rules which it will be always advisable to follow.

For the inflamed intestine we endeavour to obtain as complete rest as possible, firstly by the avoidance of all purgatives and secondly by limiting the diet to milk, beef tea, chicken broth, raw eggs, and such like.

Liebeirmeister asserts that milk is unsuitable as food in this disease,

but it is improbable that this theoretical doctrine will prevail against the teaching of so much practical observation.

From two to three pints of milk, half a pint to a pint of beef tea, and in some cases one or two raw eggs should be given daily in small quantities and at regular times.

As to the time when the intestine is capable of bearing solid food, we have unfortunately no better index than the thermometer, and it is usual to wait until the temperature has been normal throughout the day for about a fortnight.

German authors have recommended a dose of five grs. of **Calomel** at the commencement of the attack, as tending to limit the ulceration, but it is not always easy to say what is the commencement.

Diarrhœa is not so usual as is generally supposed, but if it be excessive it is best checked by **Opium** in a **Starch Enema.**

If constipation has lasted over four days a simple **Enema** should be given, as by emptying the lower bowel it removes a source of irritation to the small intestine.

For peritonitis **Opium** must be freely given, but if it be a sequel to perforation there is small hope of recovery.

For hæmorrhage direct astringents are used, but it is doubtful whether they ever reach their destination. **Ergot** and **Opium** are perhaps the best of many feeble resources. It is difficult to steer between the two evils of allowing the patient to die of exhaustion and increasing or renewing the hæmorrhage by alcohol.

For excessive tympanitis, **Opium** and a warm water **Enema** should be given. Puncture of the abdomen is, doubtless, for the time effective and probably in no way injurious, but it is a proceeding which is unlikely to become popular.

Attempts have been made to check the ulceration by antiseptics, of which **Eucalyptus** has appeared to give promising results.

Apart from the intestinal mischief the patient is in danger of dying from exhaustion in consequence of the waste of his substance on the increased production of heat, and also it is said from the direct effects of the high temperature.

To limit the production of heat it is common, more especially in Germany, to make use of antipyretic remedies. These drugs effect the purpose for which they are given, but it is not certain that they are innocuous, or that the cases so treated are ultimately benefitted, and it may be remembered that the temperature could be effectually reduced by a large dose of **Prussic Acid.**

As regards the cold bath treatment it must be borne in mind that

young, and of otherwise sound constitution, patients are not so much affected by a continued high temperature as are persons more advanced in life, and it is for the latter class that the cold bath is least advisable; and also it must be remembered that the thermometer is no guide to the severity of the case.

Although the writer does not recommend the bath as a routine treatment he considers it of much use when the patient is restless, but fairly strong and not dangerously ill.

A patient though apparently dying from exhaustion but without hæmorrhage or peritonitis, is seldom so ill that recovery can be said to be impossible and he may be often "pulled through" by the free use of **Alcohol**, which is most serviceable and most grateful in the form of champagne.

There is no disease on which the result depends so much upon the ability of the nurse. During the delirium she is careful not to irritate him. He passes his motions unconsciously and she sees that he be scrupulously clean. She keeps the room sweet and well ventilated, sees that the bedclothes are properly arranged, and attends to many other duties, trifling in themselves, but of which the sum total is more beneficial to the patient than tons of antipyrin or gallons of cold water. Lastly, during convalescence she must be trusted to see that no food, other than that ordered, is given to the patient by sympathetic but ignorant friends.

If the patient be delirious care should be taken to see that there is no retention of urine.

For the "swelled-leg" which occurs as a sequela of this disease, rest, elevation, and a flannel bandage are necessary.

In periostitis, rest, **Opium** to relieve pain, and where there is much fever an incision should be made down to the bone. Relapse in the writer's experience is very rare and rarely, very rarely, fatal. When it occurs, the patient should, if he have discontinued it, resume his sick-diet, and wait until the relapse disappears.

TYPHUS FEVER.

Alexander Collie, M.D.

There is no drug which can modify the course or hasten the crisis of the fever. The most we can do is to remove all causes prejudicial to the patient's recovery. It is essential that he should be confined to a large and well ventilated room, and that he should be carefully nursed. The cold bath and opium should not be used. To procure sleep a warm bath and **Alcohol** are useful. During the fever the diet should consist of milk, beef tea, and eggs, and as much of these as the

patient can digest should be given frequently in small quantities. Immediately the crisis is passed he may have a mutton chop.

Care must be taken to examine the lower abdomen daily to see that there be no retention, and the nurse's statements that he passes water freely must be accepted with reserve, for she is often deceived by the dribbling away of urine from an over-distended bladder. Alcohol should not, if possible, be given in the early stages of the fever—on the same principle that a rider does not push his horse at the commencement of a race. It may be used, however, to land a patient over the crisis. When there are signs of lung mischief it must be freely used. In parotitis, incisions should sometimes be made when there is no fluctuation, in order to relieve pain. Gangrene of the extremities is an occasional occurrence and may call for amputation.

ULCERS. *W. H. Elam, F.R.C.S.*

In the "*Russkaia Meditzina*," No. 35, 1886, p. 584, Dr. A. Voskresensky, surgeon to the Fëodosiïsky regiment, speaks highly of benzoin (*Resina benzoes*) as a specific remedy for treating ulcers of every kind, but especially those which occur in emaciated, cachectic, and old persons. The remedy is largely used for the purpose by Russian peasants from the oldest times. The author employs it in the shape of salve, prepared *ex tempore* of two drachms of **Resina Benzoes**, half an ounce of yellow wax, and half an ounce of lard. The ointment is spread in a moderately thick layer over a piece of linen, and placed on the ulcer. The latter must be previously irrigated with tepid water, and then dried with hygroscopic cotton-wool. The dressing is to be changed as a rule twice daily, but in cases of very large or old ulcers it is advisable to change it three times a day. A marked improvement becomes visible within a few days: torpidity of the ulcer, callosity of its edges, and its liability to bleed rapidly disappear; granulations assume a more rosy tint, and begin to discharge a thick benign pus; while there appears a whitish-bluish zone of the corium, which gradually spreads from the periphery towards the centre of the ulcer. So favourable an action of **Benzoin** on ulcers is ascribed by the author partly to its disinfectant and antifermentative, partly to irritant properties.

URETHRA (Stricture of).

The treatment of this affection by electrolysis has recently received considerable attention, and so far the results appear to have been very satisfactory. The method employed is as follows:

A gum-elastic or celluloid bougie with a wire running down to the centre, terminating in a metal end, forms the urethra electrode, and

this being connected with the negative pole is passed into the urethra and held gently pressed against the stricture; it should be of a size larger by two or three m.m. than the calibre of the stricture. To the positive pole a pad electrode is attached and placed over the patient's sacrum. The battery used is a Stoehrer's thirty cell, and a current of about five to eight milliampéres strength, which is gauged by a galvanometer. (See "Dictionary of New Treatment," 1887.)

URINE (Incontinence of).

In a recent clinical lecture delivered at St. Peter's Hospital, Dr. E. Henry Fenwick stated that for enuresis, whether suddenly developed as the result of accident or operation, or in other cases where the incontinence of urine had been of several years standing, he was acquainted with no drug which gave such entirely satisfactory results as the tincture of white **Lycopodium.** (See p. 74).

Willeford and Altarnwando in recent contributions have spoken highly of **Rhus** in the affection. The former recommends doses of 10 to 15 drops of the fluid extract after meals; but the latter and Dr. Domingnez state that the fluid extract is inert, and recommend that the tincture shall be employed.

For the nocturnal enuresis common in old people, **Cantharis,** Tinct. 1 to 2 minims, is sometimes valuable; but **Belladonna** is frequently needed at night. We believe that for this purpose the solid extract is much more potent than a corresponding dose of the tincture, and that a pill containing Extract $\frac{1}{6}$ gr. given at bedtime, and repeated during the night, if necessary, is generally sufficient to allay the nocturnal incontinence of those who suffer from enlarged prostate.

URINE, Incontinence of (in Women.) *John W. Taylor, F.R.C.S.*

I.—In the Young:—

From epispadias (rare.) Treatment: **Operative Repair.** (Case reported by Mr. A. Smith, "Brit. Gyn. Jour.," 1886.)

From mental excitement (over study.) Treatment: **Rest,** and **Avoidance of Night Lessons.**

From other neurotic causes. Treatment: **Belladonna** (Tr. ♏v to xx, or as extract by **Suppository**) **Creasote** (♏j) and the local application of **Nitrate of Silver** in strong solution or in solid form to the urethra.

From worms (ascarides vermicularis. Treatment: Small doses of **Calomel** and **Scammony,** and attention to finger nails.

II.—In Adults :—

From the same cause. Treatment : The **Aperient Mineral Waters.**

From atony of bladder and overflow. Treatment: **Catheterism, Washing-out** and **Strychnia.**

From previous urethral dilatation. **Rest** and **Strychnia** (?)

From prolapse and vaginal cystocele. Treatment : **Perineorraphy** or the use of a **Shelf** or **Zwancke's Pessary.**

From cough. Treatment : **That of Bronchitis.**

From vesico-vaginal fistula, (proved by injection of milk into bladder). Treatment : **Operative Repair.**

From urethral cyst. Treatment : **Removal.**

URINE (Pathology and Analysis of the).

Robt. Saundby, M.D., F.R.C.P., Lond.

The title of this article indicates a subject far too extensive to be adequately dealt with within narrow limits ; all that can be done is to refer to questions of special interest from their practical importance or otherwise.

Micro-organisms in Urine.—Normal urine is free from micro-organisms, and can be kept for months in a warm place ; but Kannenberg states that he has found spheroid and rod-shaped forms in the urine of healthy persons, and that in all acute diseases they are greatly increased. Undoubtedly many organisms find their way into the urine after it has left the body, and torulæ are not uncommon, especially in saccharine urine. These torulæ are the sporules of the common moulds (penicillium glaucum and aspergillus niger), and of the yeast plant (saccharomyces cerevisiæ). *Putrid* urine swarms with bacteria, of which the best known is bacterium termo. The ammoniacal decomposition of urine is said to be due to the action of a minute spherical bacterium called by Cohn *micrococcus ureæ.*

In morbid conditions of the urinary tract, as well as in many specific diseases, organisms are found in the freshly passed urine which do not give rise to any chemical change in it ; one of the earliest known was *sarcina*, which appears in certain cases of vesical catarrh. Sir William Roberts has described three cases of bacteruria associated with bladder troubles.

Tubercle bacilli have been found in the urine in tubercular diseases of the urinary organs, and of the epididymis (Rosenstein). Bouchard found micro-organisms in typhoid, puerperal fever, measles, erysipelas, dysentery, osteomyelitis, diphtheria, and phthisis.

In many conditions organisms have been observed in the kidneys

post mortem when they have not been found in the urine, *e.g.*, micrococcus diphtheriæ, the micrococcus of ulcerative endo-carditis, microsporon septicum, Friedländer's pneumococcus, etc.

Allied to this subject is the question of the presence of digestive ferments in the urine. Trypsin, the proteolytic ferment of the pancreas, is said to be normally present, while according to Mya and Belfanti, it is replaced by pepsin in cases of Bright's disease. An amylolytic ferment has been shown by Holvotschiner and Breusing to be present in urine; it is capable of converting boiled starch solution into some of the preliminary stages of glucose, *e.g.* erythro—and achröödextrines, but not farther according to the latter observer. (Breusing, "Virch. Archiv.," vol 107, p. 186.)

Albumen.—The frequency of the occurrence of albuminuria, even in apparently healthy persons, has been already referred to (*vide* art. "Albuminuria"), and Posner has proved that a minute amount of serum albumen is a constant constituent of normal urine. (Posner, "Virch. Archiv.," vol. 104, p. 1.)

Such traces, however, will not embarrass the practitioners who employ boiling and acidulation, only, in their urinary examination.

Paraglobulin resembles serum albumen in most of its reactions in urine, and these substances are generally present together. It has occasionally been found alone, but its pathological significance is not clear. It may be separated from the urine by precipitation with magnesium sulphate.

Peptone is met with in the urine in many acute diseases, and especially in connection with pneumonia, pus formation, enteric fever, and carcinoma. It is not certain that peptone is excreted as such by the kidneys. The albumen of Bright's disease is not uncommonly partially converted into peptone, and the existence of proteolytic ferments in the urine being admitted, such a change is easily explained. Peptone turns Fehling's solution rose pink in the cold; it is better to dilute the re-agent.

Test for Albumen.—Fill a test tube two-thirds full of urine, which must be fresh, and should be filtered if turbid, boil the upper half, add a few drops of *dilute* **Acetic Acid**, boil again, then hold the tube against a dark back ground in a good light falling from above. This method is capable of detecting very minute traces of albumen, and is free from fallacies.

When volumetric analysis is required, the most accurate way is to collect the albumen on a weighed filter paper, wash it, dry it, and weigh it again, deducting the weight of the paper. But Esbach's

tubes, which can now be obtained from Messrs. Wood and Co., of York, are sufficiently accurate to enable a comparison to be made, and to judge of the effects of drugs. The method is to precipitate the urine by a solution of **Picric** and **Citric Acids** (10 grammes of picric acid, and 20 grammes of citric acid dissolved in 800 or 900 ccs. of boiling water, and enough water added to make up the litre), and to allow the mixture to stand twenty-four hours. The tubes are graduated and the height of the precipitate indicates the percentage of albumen.

It is necessary to employ a sample of the total twenty-four hours' urine in order to give such an observation any value.

Sugar.—Minute traces of sugar are said to be present in normal urine, but these are not recognisable by the ordinary methods of testing. The diagnostic significance of glycosuria in notable quantity is much more definite than that of albuminuria; it is rarely present except in diabetes, and in that disease its concurrence with polyuria, thirst, and wasting are quite sufficient to establish a diagnosis. Temporary and intermittent glycosuria do occur, but they are rare. In various serious organic diseases of the brain and cord, glycosuria is occasionally met with.

Test for Sugar.—Fehling's solution is still the best test. Boil about a drachm of the solution in a test tube, add an equal quantity of urine, boil again, if sugar be present the yellow sub-oxide of copper is thrown down. Fehling's solution does not keep indefinitely, so that it is necessary to make a blank experiment by boiling the solution before adding the urine, when the cuprous oxide will come down if the Fehling is too old.

Albumen causes a dirty purple coagulum, peptones turn Fehling rose pink, uric acid or urates cause a slight reduction of copper. In cases of doubt it has been suggested to prepare two test tubes containing urine and Fehling, adding a little yeast to one, keep them in a warm place all night, and boil them both next morning. If sugar is present the slight reduction will not take place in the tube to which the yeast was added, but will appear in the other.

A more ready plan is to confirm the result by another test. Put about half a drachm of a saturated solution of **Picric Acid** in a test tube, add a drop or two of **Liq. Potassæ**, boil the mixture, add an equal quantity of urine, boil again; if as much as 1 grain of sugar per ounce be present, the liquid will become quite *opaque*. N.B.—A certain amount of deep brown colouring always takes place whether sugar is present or not.

Bile Pigment.—The pigment of the bile, bilirubin, appears in the

urine in all cases of jaundice, and sometimes before any change is to be observed in the skin or conjunctivæ. Its peculiar colour is recognisable by the eye of an experienced observer, even in small quantities ; but some dark urines look very much as if they contained bile until they are well diluted.

Test for Bile Pigment.—Dilute the urine if necessary to the colour of sherry in a wine glass, add a drachm or two of strong **Nitric Acid** or weak **Liquor Iodi** (1 part of liq. iodi to 10 of water) ; if bile pigment be present a grass green colour is developed. Sometimes one and sometimes the other of these tests gives the best result.

Bile Acids cannot be demonstrated satisfactorily in urine by any simple colour re-action.

Urea.—The normal amount of the urea excreted by an adult in twenty-four hours is generally taken as 500 grains.

Dr. Ralfe gives the following table :—

At 5 years	...	180	grains.
12 ,,	...	320	,,
21 ,,	...	535	,,
40 ,,	...	555	,,

But it must be remembered that sick persons lying in bed and eating low diet excrete much less, and in non-febrile cases from 250 to 300 grains may be regarded as not too little for an adult.

Speaking generally the amount of urea stands in close relation to the amount of urine. It is always increased in diabetes, both insipidus and mellitus, and decreased in acute and sub-acute nephritis, while in chronic Bright's disease with polyuria it may be normal in amount. The doctrine of renal inadequacy as a functional state prior to organic disease of the kidneys does not appear to be founded on clinical facts.

Urea formation is a function of the liver, and is increased by most of the drugs which stimulate that organ, *e.g.*, euonymin, corrosive sublimate, salicylic acid, benzoic acid, colchicum, etc.

It is formed mainly from nitrogenous matter taken as food, but also from the destruction of albuminous tissues, *e.g.*, the red blood corpuscles, muscle albumen, etc.

Its formation is increased by fever, diseases of the liver attended by active congestion without destruction of liver tissue, pernicious anæmia, etc.

It is diminished by drugs which depress the liver function, *e.g.*, lead, by profuse sweating, and by those diseases of the liver which depress its function, or destroy its tissues.

Estimation of Urea.—The most convenient method of estimating

urea is by decomposing it with **Hypochlorite or Hypobromite of Sodium Solution**, the amount of urea being determined by measuring the volume of nitrogen evolved. This method is not very accurate, but sufficiently so for clinical purposes, when we are satisfied to know whether 1, 2, or 3 per cent of urea is present.

The cheapest and simplest form of apparatus is sold by Messrs. Southall, of Birmingham, and was invented by Prof. Doremus, of New York. A more expensive but very excellent ureometer is that known as Gerrard's, made by Gibbs and Cuxson, of Wednesbury, Staffs. (We fully describe and illustrate both these instruments under section *New Inventions*, which see.)

The **Hypobromite Solution** is more energetic and rapid in its action than the hypochlorite. Its composition is 100 parts of caustic soda, 250 of water, 25 of bromine, of which 15 ccs. are employed. The solution will not keep, and should therefore be made fresh when required.

It is essential to know the total quantity of urine excreted in twenty-four hours, and to obtain a sample of the whole for analysis.

Urea may be roughly tested for by adding strong **Nitric Acid** to the urine in a watch glass and examining it with a low power, when the characteristic needle-shaped crystals can be seen.

Uric Acid.—Uric acid crystallizes out from acid urine when present in excess, and is visible at the bottom of the urine as a deposit, generally resembling cayenne pepper, but when the masses of crystals are very large it looks like brown sugar. Under the microscope uric acid crystals may be recognised by their colour, as they are always yellow, and by their shape, though this varies very much ; the commoner shapes are lozenges, oval or quadrangular tablets and rosettes.

The volumetric analysis of uric acid is difficult. The best method is that devised by Haycraft, where the acid is separated as a salt of silver. (Haycraft, "Journal of Anat. and Phys.," vol. xx., p. 695.)

Uric acid is closely related to urea, and when the formation of the latter is increased, uric acid is increased too ; also when the formation of urea is retarded, uric acid appears to be formed as an intermediate product. It is largely increased by flesh diet, fevers, certain diseases of the liver, after an attack of gout, and in diabetes.

Urates.—Amorphous urates are one of the commonest deposits in the urine. They are very soluble at the temperature of the body, and are often precipitated as the urine cools—any condition which reduces the urinary water, such as exercise, profuse perspiration or fever, is usually accompanied by turbid brick-red urine.

They are also thrown down by the acid fermentation which often occurs in urine after standing some time.

They are generally brick-red in colour, less commonly pale drab or whitish.

Under the miscroscope they are visible as dark amorphous granules, but on the addition of acetic acid characteristic uric acid crystals are formed.

Crystalline Urates are rare. *Urate of Soda* crystallizes in yellow thorny lumps, called hedgehog crystals ; it is met with occasionally in gout and in the febrile state, especially in children. *Urate of Ammonia* forms yellow spheres, dumb-bells, crosses and rosettes. It is only met with in urine which has undergone ammoniacal decomposition.

Phosphates.—From 30 to 90 grains of phosphoric acid are daily eliminated by the kidneys. It is combined with potash or soda, lime and magnesia.

Phosphates of the alkalies do not form urinary deposits ; but earthy phosphates are met with as deposits in three forms, (1,) Amorphous phosphate of lime ; (2,) Crystalline phosphate of lime ; (3,) Ammonio-magnesium phosphate, or triple phosphate.

The first occurs as a copious white deposit in alkaline urine ; under the microscope it consists of darkly refracting amorphous granules. Clear urine containing this salt becomes turbid on heating, but clears again on acidulation. In small quantities this has no pathological significance, and is normal at the height of the alkaline tide, which occurs daily about noon. In large amount it is associated with nervous depression, lumbar pain, and atonic dyspepsia. This is readily curable by **Hydrochloric Acid** and **Strychnine** given after meals, combined with regulation of the diet, which is often excessive, and prohibition of malt liquors and sweet wines.

Crystalline Phosphate of lime is a rarer deposit, and is met with in acid urines, but according to Sir William Roberts only where their acidity is feeble. Under the microscope it appears as slender bright rods, crosses, stars, and rosettes, hence the synonym, stellar phosphate.

It has no special pathological significance.

Triple Phosphates are met with in urine which has undergone alkaline decomposition, with conversion of urea into carbonate of ammonia. It crystallises in characteristic prisms, and forms a copious deposit. It is often seen as an iridescent film on the surface of the urine.

If artificially prepared by adding ammonia to the urine the crystals generally assume a feathery form.

Indican.—This pigment, if present in large quantities, darkens the urine. It is a derivation of the pancreatic digestion, and is met with in various diseases of the intestine, *e.g.*, typhoid, intestinal obstruction, incarcerated hernia, and in Addison's disease. It is recognised by mixing with the urine an equal part of hydrochloric acid, then adding drop by drop a concentrated solution of chloride of lime and shaking the mixture. A blue colour is developed which is taken up by chloroform if this is afterwards shaken up with it and allowed to settle.

Acetone.—This substance is met with in the urine of *bad* cases of diabetes, also in various acute febrile conditions ; but in the latter it has no special significance ; it is also found after the ingestion of alcohol.

The best test is that devised by Le Nobel, viz., by adding to the urine an equal part of a solution (5 grs. to oz.) of **Nitro-Prusside of Sodium**, together with a few drops of strong **Liq. Ammoniæ.** After standing a few minutes a rose violet colour is developed which may be so concentrated that water must be added to bring out its brightness.

Blood.—The pathological relations of blood in the urine have already been fully discussed, and the methods for its detection described. (*Vide* art. "Hæmaturia.")

Pus.—Pus may be found in the urine from inflammation affecting any part of the urinary tract. It is best recognised by the microscope. In quantity it forms a dense creamy deposit. With ozonic ether it gives rise to active ebullition from the liberation of oxygen.

Casts.—These are casts of the urinary tubules, and are of three kinds, (1,) Blood casts, formed of red corpuscles stuck together ; (2,) Hyaline casts, originating in various ways, (*a*) from fibrin (*b*) from a protoplasmic exudation from the renal epithelium in the minor stages of irritation or inflammation, (*c*) from the colloid degeneration of desquamated epithelial cells : The second is probably the most common form ; such casts are slender, while the third kind are broad, and have the same significance as epithelial casts ; (3,) Epithelial casts formed either by the packing together of desquamated and fatty epithelium or by masses of round cells derived by proliferation from the tubular epithelium ; these indicate a high degree of inflammation of the renal parenchyma.

To look for casts use a low power, ½ inch, with a good light. Take up the deposit or lowest stratum of urine with a pipette and place 6 drops on as many slides. Examine these in succession till casts are found. If none are found in any of the six slides, the result may be regarded as fairly indicating their absence from the urine.

Ferric Chloride re-action.—Many urines, especially in diabetes, on the addition of a few drops of **Liq. Ferri Perchlor.** assume a burgundy red colour. This was at one time believed to indicate the presence of acetone, but it does not, though it is probably due to some nearly allied substance which has not yet been identified.

URTICARIA. *N. Whitelaw Bourns, M.D.*

To ensure the successful treatment of this very unpleasant affection, the exciting cause must be carefully sought for, and when ascertained, the treatment follows general principles. Urticaria may occur as a complication of other skin affections, as in scabies or eczema. The injection of certain articles of food, as shell-fish, not infrequently gives rise to an acute attack. The disease may have a local origin, as from the bites of insects, or from touching stinging plants, and, as pointed out by Duhring, the affection may be a neurotic one, sometimes taking the place of an attack of neuralgia.

When due to errors of diet, a brisk purge, or in children, a simple emetic is most effectual. If owing to local irritation, discontinue exciting cause. In neurotic patients **Quinine** and **Arsenic** are most useful.

For chronic urticaria McCall Anderson recommends subcutaneous injections of **Atropine**, $\frac{1}{100}$ of a grain night and morning, or increasing doses of **Bromide of Potassium**, beginning with 10 grains three times a day. The presence of worms must always be enquired into, when chronic urticaria occurs during childhood.

Locally, painting the part with a solution of **Menthol**, 2 to 10 grains to the ounce of water, is said to instantly relieve the itching. ("Amer. Journ. of Pharm.")

VARICELLA. *Alex. Collie, M.D.*

This is an affection which is generally mild, and death from it may be said to be unknown. It produces, however, sometimes more discomfort in young children than might be imagined from the descriptions in the books, and therefore it should be treated carefully; for one should remember, particularly in the milder diseases, that we do not treat a disease, but a person affected by a disease, an obvious distinction which is not always made. The patient should, as a rule, keep to his bed, or at least his room, until recovery be complete.

VARICOCELE. *W. H. Elam, F.R.C.S.*

Dr. Thiriar, of Brussels, in a clinical lecture on the surgical treatment of varicocele, after mentioning that numerous methods of operation were in former times proposed and practised—such as

castration, the section of the vas deferens, and the ligature of the arteries of the cord, which necessarily interfere with the functional activity of the testis—spoke of the modern or therapeutic method as consisting essentially in the arrest of the circulation in the venous plexuses surrounding the vas deferens. Until quite recently, however, so many accidents—some of them fatal—followed operative procedures of this kind that many surgeons objected to resort to them for an affection which, however trying to the patient, cannot be considered as dangerous to life. Since the adoption of antiseptics the danger of these operations has been reduced almost to *nil*. The operation practised by Dr. Thiriar is the combination (proposed by Guyon) of Sir A. Cooper's plan of excising the skin, with the old method of excising the varicose veins themselves; Heurteloup's plan of excising a flap of skin from the posterior surface of the scrotum he does not approve of, following Guyon and other surgeons in believing that the varicose condition is usually in the anterior plexus. His plan is as follows:—An elliptical flap of skin is excised from the front of the scrotum and the bundle of veins dissected out and tied in two places, the intermediate portion being excised if the tumour is considerable. The dissecting out of the veins is a somewhat difficult matter, as there are several fibro-cellular layers to divide or tear through; the artery has to be carefully separated from the veins, a proceeding which up to the present time Dr. Thiriar has not found attended with difficulty. The wound is washed with a corrosive sublimate solution, and the lips united by a continuous suture, which is the form Dr. Thiriar prefers as a rule; antiseptic dressings and compress bandages are applied, and in a few days the patient is discharged permanently cured.

VOMITING.

Alfred G. Bateman, M.B.

There are few disorders which cause more discomfort and distress than those with which vomiting is associated. To treat it successfully the cause in each case must be hunted out and removed. *In simple bilious vomiting* Dr. Atkinson strongly recommends a mixture containing 15 minims of solution of **Potash** and 4 minims of **Tinct. Opii** every 4 hours.

Vomiting of Pregnancy. **Oxalate of Cerium,** 1 to 2 grains, **Ingluvin,** 10 grains. Cause patient to take light meal before rising, and frequent small light meals during the day. As it may be due to reflex irritation depending upon some local condition of the uterus, Sir Peter Eade, of Norwich, has suggested slight dilatation of the os uteri with

the finger. Cauterization of cervix with **Nitrate of Silver** has been recommended by Dr. M. O. Jones, of Chicago.

Vomiting from Ulcer of Stomach.—Rest stomach as much as possible; give very small quantities of peptonised milk, or **Koumiss,** at short intervals, and a teaspoonful of Brand's extract, or Valentine's meat juice, with iced water every 4 hours. Prevent the body from getting cold; later on, when pain has subsided give small pieces of sponge rusk, dry biscuit, corn-flour, Roy's blancmange powder, arrowroot, barley water; and get back to ordinary diet slowly. **Ferri Tart.**, grs. x, as tonic; **Succus Conii,** ʒss to ʒj, as sedative; **Glycerine,** soothing, antiseptic, and nutrient, as well as protective. If vomiting be very profuse give stomach entire rest and use peptonised **Enemata.**

Vomiting in hand-fed Infants.—This is due to indigestible curd as a rule; the milk should be peptonised by Fairchild's peptonising powders, or use the artificial prepared milk of the Aylesbury Dairy Company; when even these be rejected, Dr. Eustace Smith recommends two tablespoonfuls of whey, two tablespoonfuls of water, and one tablespoonful of cream, with a few drops of Valentine's meat juice to be given 3 or 4 times a day.

Sea Sickness.—Apply pressure at the moment to the pit of the stomach, keeping patient in supine position, and as near as possible to the centre of the vessel, giving often Brand's extract and about 3 or 4 **Cocaine** lozenges at long or short intervals, according to necessity of case.

REFERENCE.—Dr. Atkinson, "Practitioner," No. 357.

WORMS.

A large number of formulæ for the treatment of this affection were given in the "Dictionary of New Treatment," 1887, p. 415. Dr. Campi ("H. Racogletore Medico") speaks highly of **Thymol** as a *Tæniafuge.* It is very slightly soluble in water, but easily in alcohol, ether, or alkaline solutions. Its taste is warm, bitter, and acrid. As a germicide and antiseptic, it has been found to be second only to mercuric chloride. It has proved efficient in destroying the anchylostoma duodenalis, the parasite which gives rise to what is known as "miner's anæmia." The method is as follows: half-an-ounce of **Castor Oil** is to be taken, fasting, in the evening; the next morning, ʒij of thymol divided into twelve doses, one to be taken every quarter hour; to be followed by a second dose of castor oil. The drug is rather depressing, so it is well to give some stimulant during its administration. Up to the present, Dr. Campi has not found it fail.

XANTHELASMA, XANTHOMA, VITILIGOIDEA.

N. Whitelaw Bourns, M.D.

Two varieties of this affection have been described. Xanthoma planum, in which the patch is slightly, if at all, raised above the level of the surrounding skin, sharply defined, occurring most frequently on the eyelids, as a semicircular patch of whitish creamy yellow, or orange buff tint, soft, and apparently healthy to the touch.

Xanthoma tuberosum differs from the plane variety in being raised and mottled, seldom seen on the eyelids; the usual site being the neck, trunk, and extremities.

If treatment is called for, removal with the knife is the safest method. Rare cases of spontaneous recovery have been recorded.

YELLOW FEVER.

The study of this disease is at present almost wholly directed to the researches of Dr. Domingos Freire, who by inoculating those exposed to the influence of this fever with the sediment of the urine of those affected by it, produces a modified attack which appears to secure complete immunity from a second attack. These researches were fully considered in the "Medical Annual," 1887, p. 416.

Books of the Year.

A LIST OF THE PRINCIPAL MEDICAL WORKS PUBLISHED DURING THE PAST YEAR.

AMBULANCE AND NURSING.

A Handbook of Roller Bandaging. By Fanny E. Fullagar. Fcap. 8vo, sd., pp. 24, 6d. Griffith, Farran and Co.

A Short Manual of Monthly Nurses. By C. J. Cullingworth, M.D. Second Edition. 12mo, pp. 96, 1/6. Churchill

Accidental Injuries; Their Relief and Immediate Treatment: By Jas. Cantlie. Twelfth Edition. 12mo, pp. 162, 1/6 Clowes

Ambulance Pupil. By a Pupil of the St. John Ambulance Association. Sq. 16mo, pp. 42, 6d. Crosby Lockwood

Ambulance Sermons; Being a Series of Popular Essays on Medical and allied Subjects. By J. A. Austin. Post 8vo, pp. 392, 5/- Redway

Elementary Bandaging and Surgical Dressing; with Directions concerning the Immediate Treatment of Cases of Emergency, for the use of Dressers and Nurses. Second edition, revised and enlarged. By Walter Pye, M.R.C.S., Surgeon to St. Mary's Hospital. 32mo. pp. 216. J. Wright & Co., (Bristol)

Fever Nursing. By J. C. Wilson, M.D. Cr. 8vo. 4/6 Pentland (Edin.)

First Aid: A Book of Ready Reference in Times of Emergency, a Manual of Instruction for Ambulance Students. By George Black. Post 8vo, pp. 216, 2/6. Ward and Downey

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Nursing, Handbook of. For the Home and for the Hospital. By Catherine J. Wood. Seventh Edition. 1/6. Cassell

Practical Lessons in Nursing; Maternity, Infancy, Childhood, Hygiene of Pregnancy, Nursing of Infants, the Care of Children. By John M. Keating, M.D. Post 8vo, pp. 222. Pentland (Edinburgh).

Practical Lessons in Nursing; The Nursing and Care of the Nervous and the Insane. By Charles H. Mills. Post 8vo, pp. 148, 4/6. Pentland (Edinburgh).

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℞ Baubaloin	gr. xxiv.	Iridin	gr. xij.
Ext. cascaræ sagradæ	,, xxiv.	Fiant pilulæ duodecim.	

If these are made in the ordinary way the action of the ingredients will begin as soon as the pills are disintegrated in the stomach; but Dr. Granville wishes the iridin alone to act upon the stomach, the cascara to remain undissolved until it enters the small intestine, and the barbaloin to be carried far down the alimentary canal before it begins to exercise its effects. This he accomplishes by first making small pills of barbaloin, these he covers with rather a hard coating of gelatine. The pills are now rolled in the extract of cascara, and when they take up the proper quantity they are covered with two coats of keratin, which is not soluble in the gastric juice, but which readily dissolves in alkaline fluids. This being accomplished, the pills are next rolled in a soft mass of iridin, and when they have taken up the proper quantity they are finally coated with gelatine or varnish. The pill is now arranged so that the object aimed at is most likely to be accomplished. This is only an example of the manner in which the "concentric composite pills" may be employed, and it must be regarded a direct step in the direction of more precise medication.

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Papain (Finkler) is, we learn from Mr. Kuhn, of St. Mary-at-Hill, London, now being prepared in the form of a 1 or 2 gr. pill. It is for many people a more convenient form of exhibition than as a mixture. The success of the papain in powder, used in diphtheria in the dissolution of the false membranes is now undisputed. Professor Finkler succeeded in restoring the œsophagus in a patient that had become entirely occluded by carcinoma. Its action in dangerous cases of diphtheria in children has proved favourable when other remedies had failed to act, and tracheotomy appeared inevitable.

Hoff's Malt Extract, or as the inventor requests it may always be styled, the Hamburg Hoff's Malt Extract, continues to find favour in the extended use now made of it by the large majority of medical men. For coughs, consumption, anæmia and nervous exhaustion its pleasant taste and easy assimilation, render it an agreeable infliction to the patient, and the medical man rarely finds that it is being omitted under the plea of forgetfulness, as is but too often the case with nauseous medicines. We readily endorse the numerous recommendations of the profession and the press.

Chlorhydrate of Cocaine Lozenges (Houde) for the relief of the vocal chords, have been now for a considerable time offered to the profession by M. Houdé, the maker in Paris, or through Messrs. Newbery & Sons, of King Edward Street, City. Dr. Bridger writes that, having tested them upon himself, he found they produced a marked anæsthetic effect upon the mouth, tongue and throat.

We find them a very reliable, superior manufacture. They are not too large in form, and are conveniently held under the tongue or in the cheek, and thus dissolve gradually and with the pleasantest of effects.

The Krankenheil Spring Salt Soaps.—The waters of Krankenheil (Bavarian Alps) are particularly rich in iodide of sodium and sulphur, and have considerable reputation for the cure of chronic skin diseases and scrofulous affections of the glands. From the salt of these springs a soap has been made which has been extensively used by a number of practitioners in this country during the past year in affections of this class. It is made in three strengths, numbered one, two, and three. No. 1 is the weakest, and makes a very good toilet soap, and can be used for the face. It is mildly stimulating and antiseptic. No. 2 is more stimulating and is suitable for chronic skin affections of the body when an alterative effect is desired. This can be further increased by the use of No. 3, which is considerably stronger. We have largely employed No. 2 soap in the treatment of chronic gouty affections of the joints, and for the hot soaping to the whole body, which we order to be administered before the use of the blanket pack which is intended to produce free diaphoresis. The stimulating effect of the soap which is applied in solution as hot as the skin will bear, causes sufficient excitement of the skin to ensure rapid diaphoresis after the pack is applied. A solution of the soap in spirit which can also be obtained from the agent (Mr. C. F. Höfler, of Bilston), is one of the best applications we have used for soothing the irritation of prurigo and urticaria.

Phenate of Soda Solution.—The value of phenate of soda does not appear to be as largely appreciated as it should be. The solution prepared by Messrs. Woolley, Sons and Co., is stated to be useful in a number of conditions, of this we have no doubt, but for external use carbolic acid answers as well and is less expensive ; but when we wish to obtain the antiseptic properties of carbolic acid as a gargle or a mouth-wash, the phenate of soda is of very great value on account of its greater palatability. It was brought under our notice some eight years ago by a dentist, and we have regularly employed it since.

Liquid Dentifrice.—Prepared by Woolley, Sons and Co. Has a pleasant flavour, and decided antiseptic properties. It effectually meets the requirements of those who do not wish to be convicted "from their own mouths" of indulgence in the fragrant weed.

ANTISEPTICS.

The early history of Antiseptic treatment was calculated to make us connect this branch of therapeutics with smells more strong than pleasant: its more recent developments, on the other hand are altogether on the side of refinement and elegance. We may learn to forget the odour of iodoform, and surgery may yet be disassociated from the smell of carbolic. Our dressing case may contain only materials more soft and delicate than the contents of a ladies' ribbon-box, perfectly odourless, or with only the fragrant smell of thymol or eucalyptus, and distinguishable by delicate shades of blue and pink. We owe this primarily to Sir Joseph Lister, but Mr. John Milne of Ladywell, S.E., deserves the highest credit for the manner in which he has carried out his instructions, and also for the fact that, while enjoying a practical monopoly in this department of manufacture, he has used it to the advantage of the profession, by supplying them directly at prices which cannot greatly exceed the cost of manufacture. The alembroth gauze and wool are, it appears, in very large demand. These are prepared by soaking in a solution of corrosive sublimate and sal ammoniac, and stained blue for distinction. Its preparation was described fully in the "Annual," 1887, p. 28. Other preparations are gauzes and wools, of boracic, salicylic, benzoic and carbolic acids, terebene and thymol. A little work entitled "The Dressings and appliances employed in the practice of Antiseptic Surgery," may be obtained on application to Mr. Milne, and we think the particulars it contains will prove useful to our readers.

Antiseptic Lubricant.—This is an antiseptic ointment contained in a tube similar to, but larger, than those used for oil colours. It forms a convenient method of carrying a lubricant in the midwifery-bag. R. Sumner & Co., Liverpool.

Lints.—We have examined a large variety of samples produced by the Liverpool Patent Lint Co., of different textures, suitable to every form of dressing, and for either hospital or private practice. They are manufactured at most reasonable prices at the Mark Street Mills, Liverpool, and can be recommended.

Sanitary Rose Powder.—This is the best form of dusting powder for nursery and toilet use which has come under our notice. Its great feature is its solubility. It does not cake on the skin, and being a pure, mildly astringent antiseptic it has advantages over the ordinary toilet powders which are self-evident. Messrs. Woolley, Sons & Co. are the manufacturers. It is prepared with boracic acid, at the suggestion of Mr. Lund, of Manchester.

Pinus Pumilio—Pumiline—The Pine Treatment.—The products of the pine have been recognised from early times as important therapeutic agents. At some German spas, notably at Reichenhall, the "cure" consists in the use of the products of the *pumilio pine*, in baths, inhalations and other applications. The attraction of the place is the superiority of the *pumilio* pine and the care with which the products are prepared and applied. A *replica* of the German spa has now, at great cost, been erected at Farnborough, close to Aldershot and within an hour's run of London. The pine treatment, as at Reichenhall, can therefore be undergone in the Farnboro' Hydro-therapeutic establishment, which was opened in November for the purpose of bringing the pine treatment within the reach of all. The products employed are the same as used at Reichenhall imported from the same locality by G. & G. Stern, whose "pumiline" is recognised as the best essential oil of pumilio pine in the market.

But the most interesting point to many will be that Stern's pine products can now be obtained through every druggist, and the pine treatment largely carried on at home by those patients who cannot visit the establishment. Thus the extract for the baths can be bought in bottles and used in ordinary warm water. It also enters into other preparations.

But by far the most important product is the essential oil "*pumiline*" which deserves at once to replace the various terebinthenate remedies that are more or less in vogue. It possessses the natural fragrance of the pine without the disagreeable and irritating quality of turpentines. It is less irritating than terebene and may be taken in the same way either on sugar or in a mixture.

Pine jujubes have also been prepared with this oil, which can be used for the general effect as well as for the local influence of the remedy. The most effective plan is, however, inhalation ; and the following formula will supply a vapour which may serve as a substitute for the inhalation rooms at Reichenhall or Farnborough.

℞ Olei Pini Pumilionis (pumiline)	♏ xl.	Magnesii carb. levis	ʒj.
		Aquæ	℥j.

Rub the pumiline with the carbonate, adding the water gradually.

A teaspoonful of this mixture is to be put into any ordinary inhaler with half-a-pint of cold water ; then half-a-pint of boiling water being added the vapour may be inhaled. This can be repeated at suitable intervals and is more agreeable than inhalations of the oil of the pinus sylvestris, of turpentine, terebene and similar substances.

Sprays containing pumiline have also been recommended, but

in consequence of its concentrated state it is better perhaps simply to diffuse the spray through the apartment. For this purpose the simplest spray apparatus will suffice and the pumiline may be sprayed pure or mixed with spirit. An occasional pressure on the india-rubber ball will send sufficient spray into the room to give an agreeable but not oppressive perfume of the pine, and has been found an excellent disinfectant. When a spray apparatus is not at hand, the pumiline being a very volatile essential oil may be added to warm water in a saucer, or if a slower evaporation be desired a few drops may be poured on blotting paper, which can be pinned to a curtain or placed in any convenient position.

Besides diseases of the respiratory passages, rheumatism and some cutaneous affections are largely treated at Reichenhall, and the several products of the pumilio pine may be utilised to form similar applications to those used at the Spa.

INVALID FOODS.

The choice of foods adapted for invalids is a constant source of difficulty less from the lack of suitable articles than from the need of constant variety to tempt the capricious appetite of the valetudinarian. Great attention has lately been given to this subject by manufacturers, and it daily becomes less difficult to suggest some preparation that meets the requirements of the invalid. The following are some of the preparations samples of which have been examined by us during the year.

Carnrick's Liquid Peptonoids.—The preparation of beef peptonoids in powder, is well known to the profession, we attach particular value to the liquid preparation because it differs in flavour from all other invalid foods, having neither the taste of beef, wine nor gruel. It resembles more a delicate liqueur, and is acceptable by some invalids where none of the ordinary preparations are tolerated. It contains albuminoids in the form of fibrin, gluten and caseine, and has the properties in a more dilute form of the beef peptonoids in powder. We find that it is quite compatible with acids, and when diluted with water, and phosphoric acid dil. is added, it forms a very nourishing acid drink for patients suffering from fever, while a few drops of ac. hydrochlor. dil. added to half a wineglassful of the liquid, and given before meals forms an excellent gastric stimulant in atonic dyspepsia. Messrs. Carnrick & Co., of Hart Street, Bloomsbury, W.C. are the manufacturers.

Angell's Food.—This is a cooked and pancreatised food, only requiring the addition of hot milk and water. There are few foods so

easy of preparation or of digestion. The complaint which we have against most of the farinaceous foods, which are given to invalids, is that they leave so much work to be done in the stomach which should be done in the kitchen. In this food both the cooking and the digestion of the starch is already performed, and it can be readily assimilated by the most delicate invalids and by the youngest children. R. Sumner & Co., of Liverpool are the manufacturers.

Gunn's Oat Flour is more suitable for those who do not require the food to be predigested, although in this the partial conversion of starch into sugar is accomplished by the manufacturer and it requires less cooking than the raw oat products. Containing as it does all the invigorating properties of the oat in an easily assimilable form it is a particularly valuable food for those who suffer from mental worry and nervous exhaustion. It is made by Messrs. Gunn & Co., Victoria Mills, Bath, who also supply a preparation called **Rolled Oats**, which corresponds to oatmeal, but for the reason mentioned above is much more digestible.

Nutrient Suppositories.—Mr. Griffin has done good service to the profession by introducing a method of rectal alimentation which is not only more convenient than any other, but which is also more certain and precise. The administration of a nutrient enema in private practice involves a great deal of instruction on the part of the physician, and no small amount of preparation on the part of the nurse, and then unless the artificial digestion of its constituents has been carried out efficiently, it is practically useless. Mr. Griffin presents us, instead, with a suppository containing beef extract in combination with peptic fluid and pepsine porci, each being equal to three ounces of peptonised beef tea. Some of our medical friends have given them a careful practical trial, and have expressed themselves highly satisfied with their nutritive properties. In one case where they were being used constantly, the patient died from strangulated bowel, and a *post-mortem* was made. Not a trace of the suppositories could be found in the intestine giving conclusive evidence of their complete absorption. They are manufactured by Mr. Griffin Saville Row, Bath.

Edwards' Dessicated Soup.—Is now very widely known, and its value appreciated. It is produced in two forms, one consisting of beef and vegetables, and the other a "white soup" containing only vegetables. That it is more palatable than the soups which generally come to table is unquestionable, it is cheap, for a quart of soup can be made for threepence. The only question is whether

it is nourishing? Both from personal experience, and from the analysis of Dr. Cameron, of Dublin, we conclude that it is a food in the highest sense of the term, and not merely a stimulant, such as many of the beef essences which are so extensively used for invalids. It is manufactured by Fredk. King & Co., Belfast.

Dahl's Dyspepsia Cakes.—At first sight these hardly appear the kind of food which would be selected for a dyspeptic. They are made entirely from the outer husks of various cereals, and have become very highly appreciated in America for the excellent results which have followed their use in certain forms of dyspepsia associated with constipation. These results appear to be entirely due to their mechanical effect in cleansing and stimulating the gastric and intestinal mucous membranes, and thus improving the tonicity of the alimentary canal. They should be soaked in coffee or milk before use, and taken in this way they are fairly palatable. They may be obtained at Dahl's Agency, 41, Eastcheap.

Malted Cocoa.—A malted cocoa, introduced by Messrs. Fry & Sons, of Bristol, the well-known manufacturers of pure cocoa, is a combination of Allen and Hanbury's extract of malt, and cocoa deprived of its superfluous oil. It would be difficult to find a more palatable way of exhibiting malt preparations, or a beverage better calculated to at once nourish and improve the digestive powers of invalids. We can strongly recommend it to the notice of our readers.

Maltine with Cod Liver Oil—Is one of the preparations of the Maltine Manufacturing Company, Hart Street, Bloomsbury, the value of which is too well known to need comment. The addition of maltine to cod liver oil renders it not only more palatable, but by causing its rapid digestion, ensures against its repetition. The present sample fully maintains the reputation which this preparation has obtained.

Invalid Wines.—The choice of wines suitable for invalids is a subject of some importance to the physician, and one that is not infrequently accompanied by some difficulty. Clarets and the light white wines are dismissed as too thin and acid, burgundy and port as too heating, sherry upsets the liver, and the tendency is to fall back on whisky and seltzer water. We think that whisky is by no means the best of alcoholic stimulants, and that a well made and well matured rum is far less likely to cause gastric catarrh than whisky. But there are cases in which all forms of spirits are objectionable, and where the object is to obtain a stimulating beverage with as little alcohol as possible. In such cases, Tarragona is a much neglected wine, probably

because of the thick sweet compound which is imported to this country under that name. The vin ordinaire of the country, which can be imported direct through any respectable wine merchant, forms a very suitable wine which takes the place of claret, and at about the same cost. A better wine than this is "Zinfandel," which is produced on the virgin soil of the Californian vineyards. It is claimed, with some reason, that the vines grown on this soil, which is strongly impregnated with iron, yield a wine more nourishing and vitalizing than those which are grown on the exhausted Phylloxera-diseased soils of the Bordeaux districts. This wine has neither the acidity of claret or the heating properties of Burgundy, and we have never prescribed one which has given greater satisfaction to our patients. It is full-bodied and has a most delicate aroma, and this is most appreciable when the wine is allowed to stand in a warm place for a short time before it is administered. This can be obtained through Messrs. C. W. Pearce and Sons, of 16, Mark Lane, E.C., who are the agents for the vine-growers.

An old "red wine" sold by Peach, of the Exchange, Bath, enjoys more than a local celebrity. This more nearly approaches port wines, but is very much lighter and easily digested. These wines are all inexpensive, and appear to us to meet satisfactorily the ordinary needs of those who require a wine with some body, but low alcoholic strength.

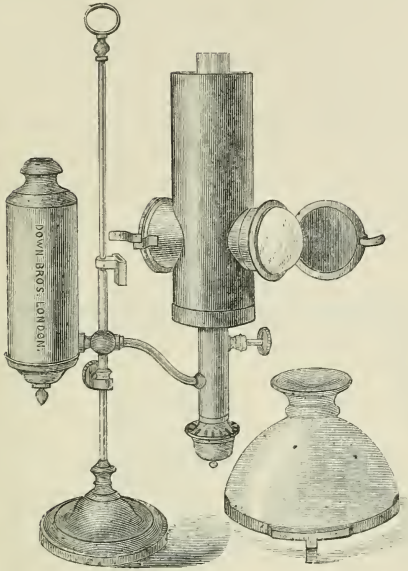
NEW INVENTIONS.

Medical Lamp.—We illustrate here a new form of lamp for laryngoscopic and ophthalmic examinations. It is made by Down Bros., 3, St. Thomas's Street, London, E.C., at the suggestion of Mr. G. A. Carpenter, M.B. (Resident Surgeon, Evelina Hospital), and combining as it does, the advantage of convertibility with an ordinary reading lamp, will be found exceedingly useful. The light can be arranged at any height or turned in any direction, and fixed at that point by means of the binding screw on the upright rod. The lamp is fitted with a silver burner, and when arranged for laryngeal and rhinoscopic examinations as shown in the wood-cut, the condensed light is equivalent to twenty-five standard candles.

For ophthalmoscopic purposes the cover is closed over the bull's eye, the chimney rotated and a light of ten candle power is obtained by opening the shutter.

One feature of the lamp is using a chimney of large diameter, with perforated collar at the base to allow the passage of a stream of cool

air between the glass and metal chimney, thereby preventing fusion of the former.



The chimney itself is of blue glass to provide for the absorption of the yellow rays.

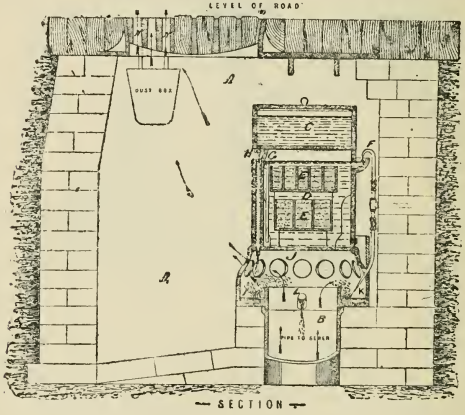
For use as an ordinary lamp it is necessary to remove the metal chimney and adopt the opaque glass shade.

Electrolysis of Fibroid Myoma.—We notice in connection with Electrolysis that Mr. Coxeter of Grafton Street, Gower Street, London, will forward on application, full particulars of the instruments as used by Apostoli.

The New Enema Nozzle—Invented by Mr. Lange of Arthur Road, Holloway, renders the usually laborious and awkward operation of an injection far more easy for the patient, and absolutely minimises any danger through misdirection when self-applied. It has two improve-

ments over the instruments in ordinary use, the first being the shortness of the nipple, which is not more than an inch and a half long; and the other, the hollow pad, whereon the patient sits in an easy and unconstrained position. In spite of the efforts of French poets and artists to shed a halo of poetry round this operation, they have not hitherto achieved success. Mr. Lange's invention appears a decided step in the right direction.

Harris Reeves' Patent Apparatus (Automatic) for Disinfecting and Deodorising Sewer-Gas and Sewage.—This Apparatus, which is of simple construction, cheap, and readily understood by, and within the management of any intelligent workman, contains chemicals which act simultaneously on the gas present in sewers and escaping from sewer ventilators, and on the sewage itself. A is a man-hole, with one of the apparatuses fixed over a



ventilating shaft B leading from a sewer. The apparatus consists of three chambers, of which the upper one C contains strong sulphuric acid. Below this is a second chamber D, in which the trays E are arranged superposed, each tray being divided into cells, and containing permanganate of soda, which is gradually dissolved by water

flowing into D from the pipe F. The solution of permanganate of soda and the sulphuric acid meet in a disc I in the lower chamber J, and sulphurous acid gas and oxygen are freely given off. These fill the chamber J and lie in the way of all gases coming from the sewer, rendering them absolutely innocuous, and destroying all putrefactive micro-organism, as shown by an analysis and meteorological examination performed by Dr. Wynter Blythe, Public Analyst. Free circulation of air is not impeded in the least, and the treated sewer-air escapes by the round holes in the side of chamber J into the street by the grating N.

The liquid, consisting of a strong solution of permanganic acid with some sulphuric acid, is thoroughly agitated and mixed by a stream of water from pipe K, and then overflows through L into the sewer. It then oxidises all the organic impurities, the sulphuric acid aiding in this and also fixing the ammonias, free and albuminoid. Describing their effect, Dr. Wynter Blythe says, "The crude sewage was offensive, "and did not clear on standing ; the disinfected sewage rapidly "deposited, the supernatant liquid being bright and clear with "absolutely no odour."

This apparatus has been used in the town of Frome with the greatest success, and they are also working in Marylebone and numerous other places. Each apparatus is sufficient to treat the sewage of 400 persons. A change of chemicals lasts one month, during which time no attention is needed, and costs from 2/- to 3/-. It is obviously a most valuable invention, both for private houses, and public sewers, and seems to us to solve the question of sewer ventilation completely. In conclusion, the analyst says : "The "principle of the process is chemically correct, and without a doubt "the apparatus is efficient, and is capable of deodorising and disin-"fecting sewer gas and sewage."

The apparatus is made by the Harris Reeves Company, Limited, 107, New Oxford Street.

Poro-Plastic Bandages.—These are bandages made of thin poro-plastic, soft at the edges. They require only to be dipped in hot water, and used from end as required. They are well adapted for cases of emergency, and will probably prove useful in many conditions which will suggest themselves to the surgeon. They are made by Messrs. Cocking, of 11, Langham Street, Portland Street, W.

Sphygmograph (The).—A new recording apparatus for the pulse, radial, ulnar, temporal, tibial, etc.

Dr. Mortimer Granville, who has suggested and introduced the

instrument, writes: "It is claimed for this sphygmograph that it is smaller, and therefore more easily carried in the pocket, than any other. That it is easier of application, and less influenced by the mode of use: and that it gives a tracing which shows more accurately the conditions of the artery, and the motion, volume, and force of the blood-current.

There is no spring to adjust, and that used is so nearly in a state of rest, that the up-stroke of the tracing is not produced by a jerk as in the ordinary spring sphygmograph, which projects the needle much higher than the dilation of the artery raises it, and thus vitiates the tracing by making an acute angular apex when, perhaps, the head, to be accurate, should be flat.

The needle not being thrown up with a jerk by the spring, but raised by the artery, the up-stroke is not *perpendicular* (which must, of course, always be an error), but inclines in a direction opposite to the movement of the paper, so that the length of the base line, of the triangle of obliquity, indicates by the proportion it bears to the total length of the interval between the starting point of one up-stroke and the next, the time occupied in the dilatation of the vessel.

This matter of proportional time—involving the distribution of time over the several component parts of the sphygmogram—is not less important in the study of the pulse than in the study of the movements of the heart. As this new instrument will give an accurate record of the pulse, it will be found trustworthy for both clinical and physiological purposes.

It is provided with a special comb-like adaptation for removing the black in horizontal lines two millimetres apart, thus affording a measurement of the height of the up-stroke."

The instrument is made by Messrs. John Weiss & Son, of 287, Oxford Street, and has been prepared by Mr. Frederick Weiss, to whom the profession is indebted for much ingenious and skilful aid.

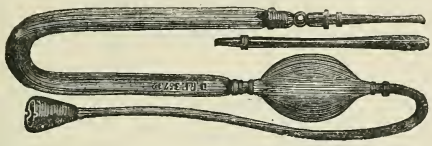
Vaccination Shield (Sumner's).—These hitherto have been universally condemned because they press upon the part of the arm that should be most protected. This on the other hand causes no pressure on the arm *whatever*, but is fastened to the body of the child.

The vaccinated arm is passed through the circular hole, the clothes on the shoulder are looped with the tape on the top—this allows the arm perfect freedom, and at the same time absolute protection to the vesicles.

Medical men frequently are accused of "*using bad lymph*," when

such inflammation takes place after vaccination, which is caused very often by either non-protection or undue pressure to the arm. Our readers, therefore, will do well to recommend the use of this 'shield."

Enema with Continuous Stream.—Under the name of the 'Alpha syringe" Messrs. R. Sumner & Co., of Liverpool, have introduced an enema which will at once supersede the various forms now in use in this country. Its great and important feature is that the stream is not intermittent, and the injection of air is impossible. But this is not all, instead of the hard india-rubber requiring considerable pressure to force the stream of water, it is made of striped

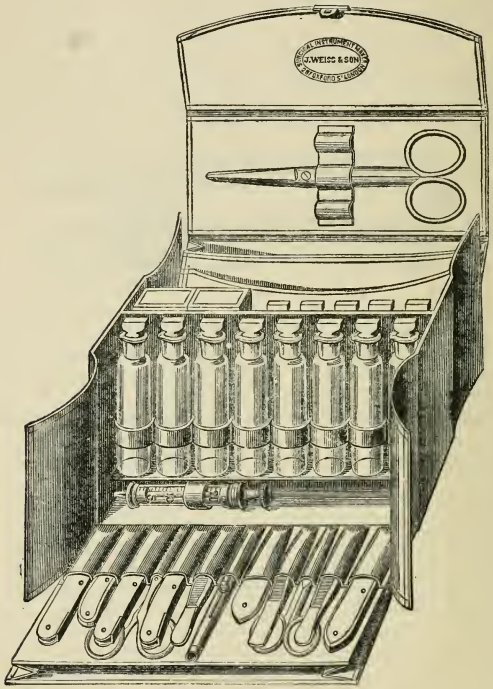


sheet rubber, as soft as satin to the touch, and which requires only the gentlest pressure to maintain a steady flow of water. The sucker is also covered with rubber and drops into the vessel noiselessly. It is further provided with a ring by which the syringe can be hung up when not in use. The rectal and vaginal pipes are made of highly polished hard rubber, and may on the application of heat, be bent to any required degree.

We are perfectly sure that any practitioner, who has seen one of these syringes, will never purchase another of the old kind.

A Pocket Medical Emergency Case.—While the surgeon is provided for contingencies with his pocket case, the physician and general practitioner is, for the most part, dependent on his communications with some druggist's shop or private dispensary for help in the emergencies he is called upon to treat, and not infrequently placed at a great disadvantage. Dr. Mortimer Granville has devised a pocket medical emergency case which will, he believes, cover the needs of the practitioner, both in medicine and surgery. The case, which the annexed plate shows, standing open for use, measures when closed, 5½ inches in length by 4 inches in height, with a thickness of 2½ inches. Its contents are as follows: The instruments usually carried in a complete surgeon's pocket case, *e.g.*, finger knives, bistoury, scissors, forceps (artery and ordinary),

needles, ligatures, catgut, silk and wire, lancets and gum lances, probes and director, air pressure pins, and elastic catheters of the most usual calibres, Olive's test papers for albumen and sugar, spirit lamp, complete tests for uric acid (Haycraft's modified), test tube,



urinometer, etc., and the following medical applications : nitrate of amyl in tubes for angina and spasm, nitro-glycerine tablets, a hypodermic syringe with two needles, and the undermentioned

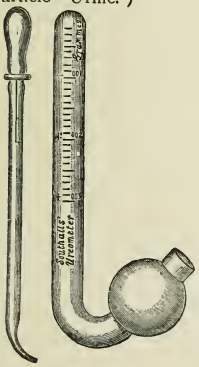
promptly acting drugs in standard solutions (Allen and Hanbury's) for instant use :—

1. Ammonia for syncope or collapse.
2. Opium } For relief of pain or producing the sedative action of the
3. Morphia } entire opium in colic and peritonitis.
4. Pilocarpine, produces diaphoresis.
5. Apomorphine, to evacuate the contents of the stomach without nausea, in poisoning.
6. Coto, to check profuse diaphoresis or diarrhœa (said to be of value in cholera).
7. Ergot, to produce arrest of hæmorrhage in apoplectic cases. as well as to excite the uterus to contraction post partum.
8. Hamamelidin, to restrain passive hæmorrhage as in hæmorrhoids, or to check passive mucous discharges.
9. Thalline, to exert a powerful antiseptic action with great rapidity in cases of blood poisoning.

These solutions are of uniform strength, the average dose hypodermically being 5 *minims*.

The case is provided with pockets, and so constructed as to place every one of its contents within easy reach of the practitioner, as soon as it is open. The sketch renders more detailed description unnecessary. It is made by Messrs. Weiss and Sons, 287 Oxford Street, London.

Southalls' Ureometer.—Recommended by Dr. Saundby. (See article "Urine.")



DIRECTIONS.

Pour solution of sodium hypo-bromite up to the mark =, filling the long arm of the apparatus, then add sufficient water to fill the bend and lower portion of the bulb. Draw the urine to be tested into the pipette up to the graduation. Pass the pipette into the Ureometer as far as the bend, and compress the nipple closely. The urine will rise through the solution, and the gas evolved will collect in the upper part of the tube.

Each division indicates ·001 gramme of urea in 1 c.c. of urine.

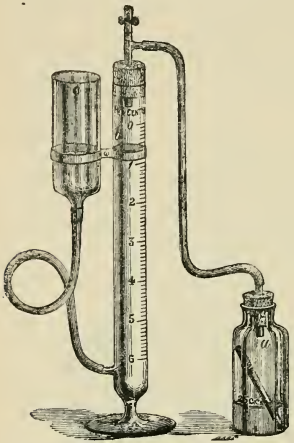
The percentage of urea is obtained by multiplying the result of the test by 100.

The quantity of urea voided in twenty-four hours is ascertained by multiplying the

result of the test by the number of c.c. of urine passed during that period. They are sold at two shillings each, and manufactured by Southall Bros. & Barclay, Bull Street, Birmingham.

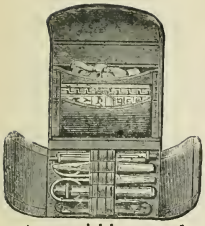
Gerrard's Ureometer.—A simple form of apparatus for estimating urea, the operation being completed in less than five minutes. The determinations are scientifically accurate, no calculations being needed, as the result of the analysis is read at once in per cents. of urea.

Pour into the tube 5 c.c. of the urine, and in the bottle (*a*) 25 c.c. or 6 fluid drachms of sodium hypobromite solution. Place the tube inside the bottle, as shewn in illustration, avoiding spilling any of the contents. Fill the glass tubes (*b c*) with water, so that the level reaches the zero line, taking care that when this is done the tube (*c*) contains only a little water by being placed high—it having to receive what is displaced from (*c*) by the nitrogen evolved. Now connect the india-rubber tubing to the bottle, and noting lastly that the water is exactly at zero, upset the contents of the tube into the hypobromite solution. Nitrogen is evolved, and depresses the water in (*b*.) When this ceases lower (*c*) until the level of the water in both tubes is equal. To be exact, dip (*a*) into cold water to cool the gas before taking a reading, and note the results, which shews percentage of urea.



The solution of hypobromite of soda is made by dissolving 100 grammes of caustic soda in 250 c.c. of water, then adding 22 c.c. of bromine.

To avoid the danger of the bromine vapour, the bromine is sold in hermetically sealed glass tubes, containing 2·2 c.c.; one of these placed in the large bottle with 25 c.c. of the soda solution, gives, when broken with a sharp shake, the exact quantity of hypobromite for one estimation of urea, and all bad odour is avoided. Manufactured by Gibbs, Cuxson & Co., Wednesbury.



ordinary visiting-round.

"Gem" Miniature Pocket Case.—This is the sweetest thing in pocket-cases which has come under our notice. It is *half-an-inch* in thickness, 3¼ inches in length, and 2¼ inches in breadth, and will literally go into the waistcoat pocket. It contains a scalpel and Symes' knife, scissors, silver caustic case, dressing forceps, probe, director, exploring needle, surgical needles and silk. It meets all the requirements of the It is made by R. Sumner & Co., Liverpool.

Private Asylums and Homes for Inebriates In Great Britain and Ireland.

We are very anxious to make this list complete, and to give all necessary information ; but unless our circular of enquiry—*which in every case is stamped for reply*—is promptly returned, we cannot undertake the responsibility of inserting particulars of an Establishment which may have been closed.

ALTON (Hants.)

Westbrook House. Proprietress, Mrs. E. J. Burnett.

ARMAGH.

Course Lodge, Rich-hill, 5 miles from Armagh, (for ladies only). Proprietors, Jas. and Wm. Orr ; Visiting Physician, H. Frazer, M.D., Armagh. Mode of access—By G. N. R. to Rich-hill Station, thence by own Conveyance, 2 miles.

The Retreat. Proprietor, Mr. A. D. Allen. (For 20 males and 15 female patients, of the middle class). Mode of access—By G. N. R. to Rich-hill, thence cab 1½ mile.

ASHTON (Lanc.)

Haydcock Lodge, near Newton-le-Willows. Med. Prop., E. H. Beaman, M.R.C.S.E. ; Res. Med. Sup., C. T. Street, M.R.C.S.E. Access—Man. & Liv. Railway, Newton Bridge Station, 2 miles.

BASCHURCH (Shropshire).

Boreatton Park, 8 miles from Shrewsbury, (for 12 male and 18 female patients, of the upper class). Prop. and Med. Sup., Dr. Sankey. Mode of access—G. W. R. to Baschurch Station.

BATH.

Bailbrook House. Prop. and Res. Med. Sup., Lionel A. Weatherly, M.D. Mode of access—G. W. R. and Midland Railways, 15 minutes' drive from each station. *See page* 588.

BEDFORD.

Bishopstone House, Ashburham road, (for 10 females). Prop. and Med. Sup., Wm. Simpson Craig, M.D. Mode of access—Midland and L. and N. W. Railways. *See page* 590.

Springfield House Asylum ; 1 hour from London. Res. Med. Sup., D. Bower, M.D. Mode of access—1½ mile from Bedford Stations of the Midland and L. and N. W. Railways.

BEVERLEY.

East Riding County Asylum, Beverley, Hull. Res. Med. Sup., M. D. Macleod. Mode of access—N. E. Railway, Beverley, 2 miles.

BIRMINGHAM.

Midland Counties Idiot Asylum. Res. Sup., Miss Stock; Hon. Med. Sup., J. H. Kimbell, F.R.C.S.; Med. Officer, G. W. Tait, M.R.C.S.; Sec., W. G. Blatch. Mode of access—G. W. Railway, Knowle, ½ mile.

Birmingham Borough Asylum, Winson Green. Res. Med. Sup., E. B. Whitcombe. Mode of access—L. and N. W. R., Winson Green, ½ mile, G. W. R., Soho, ¼ mile.

BOX (Wilts).

Kingsdown House, 5 miles from Bath. Prop., Mrs. E. A. Nash; Res. Med. Sup., Dr. J. F. Barnes. Mode of access—G. W. R., Box.

BRIDGEND.

Glamorgan County Asylum, Bridgend. Res. Med. Sup., H. T. Pringle, M.D. Mode of access—G. W. R., Bridgend, 1½ mile.

BRISTOL.

Northwoods House, Winterbourne, 7 miles from Bristol. Props., Reginald Eager, M.D., and T. G. Seymour. Access—Cab from Bristol or from Fishponds, Yate, or Patchway Stations. *See page* 592.

Brislington House, 2½ miles from Bristol. Res. Med. Sups., Drs. C. H. and B. B. Fox.

BRITON FERRY (Glamorgan).

Vernon House, near Neath and Swansea. Med. Sup., C. Pegge. Mode of access—G. W. R. to Briton Ferry, 3 minutes' from house.

BROMSGROVE.

Birmingham Borough Asylum, Rubery Hill, near Bromsgrove, Worcestershire. Res. Med. Sup., Thomas Lyle, M.D. Mode of access—Rubery Station, Midland and G. W. Railways.

BUXTON.

Wye House. Res. Phys., F. K. Dickson, F.R.C.P. Access by Great North. & Mid. Railway to Buxton.

CHARTHAM.

Kent County Asylum, Chartham, Canterbury. Res. Med. Sup. Dr. R. Spencer. Access—S. E. R., Chartham Sta., 1 mile from.

CHURCH STRETTON.

Church Stretton Private Asylum, Shrewsbury, (for gentlemen). Special attention given to treatment of Inebricty. Med. Sup., Dr.

Osburne; Assist. Med. Sup., Dr. Theo. Hyslop. Mode of access—Shrewsbury and Hereford Main Line, Church Stretton, 10 minutes.

The Grove House (for ladies). Res. Prop., Mrs. McLintock.

COLCHESTER.

Eastern Counties Idiot Asylum. Res. Med. Attend., Charles Caldecott, M.B., Lond.; Sec., John J. C. Turner. Patients 160, to be increased to 250. Payment cases received from all parts. Election cases only from Eastern Counties. Mode of access—G. E. R.

CORK.

Citadella Private Asylum. Res. Phys. and Prop., Dr. Bull. One mile from Cork.

DARLINGTON (Durham).

Dinsdale Park. Med. Sup., J. W. Eastwood, M.D., J.P.

DEVIZES.

Wilts County Asylum, Devizes. Res. Med. Sup., John Ireland Bowes. Mode of access—G. W. R. Devizes, 1 mile from Station.

DUBLIN.

Farnham House and Maryville, 3 miles from Dublin (for 60 patients, both sexes). Prop. and Med. Sup., A. Patten, M.B. Mode of access—Cab from Dublin.

Hampstead, Highfield, Elmshurst and Hillside (for 40 males and 20 females), 2 miles from Dublin. Prop. and Med. Sup., J. Eustace, M.D.

House of St. John of God, Stillorgan, Med. Sup., Dr. McEvoy. Mode of access—From Dublin, Harcourt Street Station, to Stillorgan, ¼ mile from Station. From Dublin 5 miles.

Woodbine Lodge, Bathfarnam, 6 miles (ladies). Prop., Mrs. Hayes.

DUDLEY (Stafford).

Ashwood House, Kingswinford, 4 miles from Dudley, 3 from Stourbridge (for 31 upper and middle class patients, male and female). Res. Prop., Dr. H. G. Peacock. Mode of access—G. W. R. Stourbridge, L. and N. W., Dudley.

DUMFRIES.

Crichton Royal Institution, Med. Sup., James Rutherford, M.D., F.R.C.P. E., etc. Mode of access—By Caledonian, or Glasgow and S. W. R. *See page* 589.

EARLSWOOD.

Asylum for Idiots. Res. Med. Sup., Dr. C. S. W. Cobbold. Males 400, females 200. Admission by election or payment of 50 to 200 guineas per annum. Apply to Sec., 36, King William Street,

London Bridge, E.C. Mode of access—Earlswood, L. B. & S. C. R., close to the Asylum gates; Red Hill Junction, 1½ mile away.

EDINBURGH.

Mollendo House, Musselburgh. Prop., P. Mackenzie. Cons. Phys., Thos. R. Scott, M.D. Res. Phys., A. W. Mackenzie. Mode of access—By N. B. R., Musselburgh Station.

Mavisbank House, Polton, Midlothian. Res. Med. Sup., John Keay, M.B., C.M. Mode of access—By N. B. Railway, Polton.

Royal Edinburgh Asylum, Morningside. Res. Med. Sup., T. S. Clouston, M.D., F.R.C.P.E. Mode of access—Edinburgh Railway Stations.

Saughton Hall, Institution for the cure and care of the Insane. Res. Med. Sup. and Prop., Dr. John Batty Tuke, M.D., F.R.C.P.E. Mode of access—15 minutes from Edinburgh. Gorgie station, Suburban Railway.

EGHAM.

Holloway Sanatorium, St. Ann's Heath, Virginia Water. 20 miles from London, 7 from Windsor, 2 from Egham, 2½ from Chertsey. Res. Med. Sup., Sutherland Rees Philipps, M.D. Mode of access—L. & S. W. R. Co. Virginia Water Station, 3 minutes' walk from Station. *See page* 590.

EPSOM (Surrey).

Church Street, Epsom (for 14 ladies). Med. Sup., Dr. W. C. Daniel. Mode of access—by L. &. S. W. and L. B. S. C. Railway, within 5 minutes of either Station.

EXETER.

Wonford House (*Hospital for the Insane*). Res. Med. Sup., P. Maury Deas, M.B., M.S., Lond. Mode of access—1½ mile from G. W. or S. W. Stations. *See page* 589.

FAIRFORD (Gloucestershire).

Fairford Retreat. Res. Med. Sup., Daniel Iles. Mode of access—Fairford Station, 25 miles W. of Oxford.

The Croft House Private Asylum, near Swindon and Cirencester. Med. Sup., C. D. Bloxsome. Mode of access—G. W. R. to Fairford.

GATESHEAD.

Dunston Lodge Asylum, Newcastle and Gateshead-on-Tyne. Med. Sup., W. Marshall Taylor, M.A., M.R.C.S.E. Res. Med. Officer, A. Seymour Brewis, M.R.C.S., L.S.A. Mode of access—N. E., Newcastle-on-Tyne, distance 3 miles. Boat runs hourly from Newcastle.

See page 587.

GLOUCESTER.

Gloucester County Lunatic Asylums, Wotton and Barnwood, Gloucester. Res. Med. Sup., F. Hurst Craddock, B.A. Oxon., M.R.C.S. Mode of access—Midland and G. W. R., 1 mile from Gloucester.

GOUDHURST (Kent).

Tattlebury House, (for 6 males and 2 females). Med. Sup. and Prop., R. S. Newington, M.R.C.S., L.S.A. Mode of access—By S. E. to Marden Station, 5 miles.

HADDINGTON.

Haddington District Asylum, 17 miles from Edinburgh. Med. Sup., J. Bruce Ronaldson. Mode of access—North British Railway, Haddington Station, 10 minutes' walk.

HALESOWEN.

Colman Hill House Retreat, (for ladies, 1st and 2nd class) near Birmingham. Lady Sup., Miss Cooper; Res. Med. Sups., H. R. Ker, F.R.C.P.E., T. V. De Denne, L.R.C.P. Mode of access—G. W. & Mid. R., Halesowen, 1½ mile.

HARPENDEN (St. Albans).

Harpenden Hall, 4 miles from St. Albans (for 10 ladies). Prop. and Res. Med. Sup., A. Maclean, L.R.C.S., Ed., L.S.A. Lond. Mode of access—By Midland Railway to Harpenden Station. *See page* 591.

HAWKHURST (Kent).

North Grove House, (for 18 males and 24 females), 15 miles from Hastings and Tunbridge Wells. Phys., W. M. Harmer, F.R.C.P. Mode of access—By S. E. R. to Etchingham and Staplehurst, 5 and 10 miles distant.

HENLEY-IN-ARDEN (Warwickshire).

Glendossil, Henley-in-Arden, (for both sexes). Prop., Dr. S. H. Agar.

HOLLINGTON (Sussex).

Ashbrook Hall, (for ladies). Res. Prop., Mrs. Letitia A. Hitch. Access—Station, Warrington Square, St. Leonards-on-Sea, half-an-hour's walk.

ISLEWORTH (Middlesex).

Wyke House, near Brentford and Hounslow. Prop., E. Sparshall Willett, M.D.; Med. Sup., Charles H. Keep, M.R.C.S.; both resident. Mode of access—L. S. W. R., G. W. & District Railway, Isleworth, Brentford, Osterley, each within a mile. *See page* 591.

LANCASTER.

County Asylum, Lancaster. Res. Med. Sup., David M. Cassidy,

M.D., D.Sc. Mode of access—By L. & N. W. R. or by Midland to Lancaster. *See page* 590.

Royal Albert Asylum (for the care and training of idiotic, imbecile, and weak-minded young persons). Res. Med. Sup., G. E. Shuttleworth, B.A., M.D. Asst. Med. Offr., H. G. Taylor, M.D. Sec., James Diggens. Admission by election, or at various rates of payment.

Brunton House, Lancaster, a home for special private pupils, under training at the Royal Albert Asylum. Sec. James Diggens.

LICHFIELD.

County Lunatic Asylum, Burntwood, near Lichfield. Res. Med. Sup., James Beveridge Spence, M.D. Mode of access—Lichfield (L. & N.W.R.) City Station, 3½ miles distant; Lichfield (L. & N.W.R.) Trent Valley Station, 4½ miles distant; Hammerwick (S. Staff. Railway), 1½ mile distant.

LINCOLN.

Lincoln Lunatic Hospital, The Lawn, Lincoln. Res. Med. Sup., Arthur P. Russell. Mode of access—Lincoln, G.N. and G.E., Mid. and M. S. & Lincolnshire Railways, 1 mile to Station.

Lincolnshire Pauper Lunatic Asylum, Lincoln. Med. Sup., Edwd. Palmer, M.D., M.R.C.P.L., M.R.C.S. Mode of access—Lincoln Station, 2½ miles distant.

LIVERPOOL.

Shaftesbury House. Near Liverpool and Southport. Res. Med. Sup., Stanley A. Gill, B.A., M.R.C.P. Lond. Mode of access—Lancashire and Yorkshire Railway, London and North Western and Cheshire Lines to Formby Station, about ¼ mile distant. *See page* 586.

Tue Brook Villa, 3 miles from Liverpool. Res. Med. Sup., B. Hall, M.B. (For 52 males and females). Mode of access—By L. & N. W. R. to Tue Brook.

LONDON.

Bethnal House, Cambridge Road, E. Res. Med. Sup., John Millar, L.R.C.P., and S. Edin. Mode of access—Railway Station near East Lond. Museum.

Blacklands House, King's Road, Chelsea, S.W. Res. Med. Sup., E. T. Hall. Mode of access—Metropolitan Railway, Sloan Station, ¼ mile.

Brooke House Private Lunatic Asylum. Med. Props., Dr. H. Monro and Dr. J. O. Adams; Res. Med. Sup., Dr. J. O. Adams. Mode of access—Close to the Clapton Station on the Walthamstow Branch of the G. E. Railway.

Grove Hall, Bow (both sexes). Med. Lics., Mr. Byas and Dr. Mickle. Mode of access—By G. East. and N. Lond. R. to Bow Road and Bow Stations, ⅛ mile (*via* Fenchurch and Broad St.)

Halliford House, Sunbury-on-Thames, S.W. Res. Med. Sup., J. Seaton, M.R.C.S. Mode of access—Sunbury Station, Thames Valley Railway, S. W. R., 1¼ mile.

Hayes, Wood End Grove (ladies). Uxbridge, 3, London, 12 miles. Med. Lic., Dr. H. Stilwell and Mrs. Rowes. Mode of access—Hayes Station, G. W. Railway, 1 mile.

Hayes Park, Hayes, Middlesex, near Uxbridge. Res. Med. Sup., Ed. Benbow and H. F. Winslow, M.D. Mode of access—Hayes Station, G.W.R., 12 miles from London ; 2 miles from Station.

Hendon Grove Asylum, Hendon, Middlesex. Res. Med. Lic., Dr. H. Hicks. Mode of access—By Met.R. or bus from Swiss Cottage, St. John's Wood, N.W. (five times daily).

Hoxton House Asylum, London, N. Res. Med. Sup., John F. Woods. Mode of access—North London, Shoreditch Station, two minutes' walk ; G. E. R. Liverpool Street Station, ten minutes' walk.

Kingston-on-Thames. Normansfield Training Institution (for backward and feeble-minded children). Med. Sup., Dr. Langdon Down. For 100 male and 60 female patients of the upper class. Mode of access —From Waterloo by L. & S. W. R. to Hampton Wick, 5 minutes.

Manor House, Chiswick, and 37, Albemarle Rd., W. Dr. and Mrs. Tuke, and Seymour Tuke, B.A., Oxon. ; Res. Med. Lic., C. M. Tuke, M.R.C.S.

Medical Homes Association and Temperance Agency, 5, Bloomsbury Sq., W.C. Med. Sup., C. Holthouse, F.R.C.S.

Moorcroft House, Hillingdon (males). Uxbridge, 2, London, 13 miles. Med. Lics., Drs. Stilwell and Johnson. Mode of access—West Drayton, G. W. R., 2 miles.

Otto House, 47 North End Rd., Hammersmith, W. Med. Sups., Drs. Blandford and Sutherland. Mode of access—Met. Rlwy., West Kensington Station, ¼ mile.

Peckham House, Peckham, S.E. Prop., Alonzo H. Stoker, M.D. Med. Sup., Finlay Murchison, M.B. Mode of access—Peckham Rye Station, 10 minutes' walk.

Peterborough House, Fulham. Res. Med. Sup., Jas. Robt. Hill. Mode of access—5 minutes from Parsons' Green, District Railway, also from Chelsea W. L. Railway, 4 miles from Charing Cross.

Rivercourt, Hammersmith. Cottage treatment of the mentally afflicted. Med. Sup., L. Forbes Winslow, D.C.L., Oxon. Mode of access—Railway, etc., to Rivercourt, The Mall, Hammersmith.

Royal India Asylum, Ealing, W. Res. Med. Sup., Thos. B. Christie, M.D., C.I.E. Mode of access—G. W. R. or District R., Ealing, 1 mile ; Ealing Common, ½ mile.

The Shrubbery, Southall (females). Proprietress, Miss Jane Rosser. Mode of access—G. W., Southall, ¼ mile.

The Priory, Roehampton, S.W., near Richmond. Res. Med. Sup., T. Bigland. Mode of access—L. & S. W., Barnes' Station, 8 minutes.

Vine Cottage, Norwood Green, Southall. Res. Med. Sup. and Prop., Wm. Oliver Chalk, M.R.C.S. Mode of access—G. W. R., Southall Station, 1 mile.

MAIDSTONE.

West Malling Place, 28 miles by road from London, and 5 miles from Maidstone (for 18 males and 21 females of the upper and middle class). Res. Med. Sup., Dr. James Adam. Mode of access—by L. C. & D. R. to Malling Station, 1 mile.

MARKET LAVINGTON (Wilts).

Fiddington House, 6 miles from Devizes (for 40 upper and middle class patients of both sexes). Prop. and Med. Sup., C. Hitchcock, M.D. Mode of access—Devizes Station.

MELROSE.

Roxburgh District Asylum, Melrose, N.B. Res. Med. Sup., J. C. Johnstone, M.B. Mode of access—N. Brit. R., Melrose, 1 mile.

MELTON.

Suffolk County Asylum, Melton, near Woodbridge. Res. Phys. and Sup., Wilson Eager, L.R.C.P. Mode of access—G. E. R., 1¼ mile from Melton, 2¼ miles from Woodbridge. All trains do not stop at Melton.

MOATE.

Spring Lawn, Moate, near Clara and Tullamore. Res. Med. Sup., Thomas Fitzpatrick, L.R.C.S.I. Mode of access—Midland G. W., Moate, 2 miles ; G. S. and W., Clara, 3 miles.

MONTROSE.

Montrose Royal Lunatic Asylum, Montrose, N.B. Res. Med. Sup., J. C. Howden, M.D. Mode of access—N. Brit. R., Hillside Station, ¼ mile ; Cal. R., Dubton Station, 1 mile.

NELSON-IN-MARSDEN (Lanc.).

Marsden Hall, (for both sexes). Res. Prop., Mrs. Bennett. Access —Nelson Station, on Lancs. & Yorks. Railway, or from Colne, on Mid. Railway.

NORTHAMPTON.

Abington Abbey Retreat, 1¼ mile to centre of town. Med. Sup., Geo. H. Percival, Esq., M.B. Regular visits every other day, others when necessary. Mode of access—L. and N. W. R., M. R., Northampton and Peterborough Railway, each having stations in the town, and cabs in waiting to convey fares to any part of the neighbourhood.

See page 588.

Berrywood Asylum, Northampton. Res. Med. Sup., R. Greene. Mode of access—A little over 2 miles from Castle Station, L. and N. W. R.; and rather more than 2½ miles from the Midland Station.

NORWICH.

The Bethel Hospital for the Insane, Norwich. Res. Med. Sup., Horace Turner. Mode of access—G. E. R., Thorpe Station, Norwich, 1 mile.

The Grove, Old Catton 1 mile (ladies). Props., Mr. and Mrs. T. J. C. Rackham. Med. Supts., S. Taylor, M.B., and C. Williams, F.R.C.S. Mode of Access—By carriage.

Norwich City Asylum, Hillesdon, near Norwich. Private Patients received at low rates. Res. Med. Sup., Dr. Wm. Harris, F.R.C.S., L.S.; Lady Sup., Mrs. Harris. Mode of access—Thorpe, G. E., cab fare 4/-; Victoria Station, G. E., cab fare 3/6; E. and M. Station, City Station, fare 3/-; Hillesdon Station. ½ mile, E. and M., no cabs.

NOTTINGHAM.

Lunatic Hospital, The Coppice. Res. Med. Sup., W. B. Tate, M.D. Mode of access—Mid. and G. Northern Rys., Nottingham, 2½ miles.

OXFORD.

Oxford County Asylum. Mode of access—Littlemore Station, G. W. R., first Station from Oxford on Wycombe Branch.

Warneford Asylum, Oxford 1½ mile. Res. Med. Sup., J. Bywater Ward, M.D. Mode of access—G. W. R., L. and N. W., Oxford Station, 2½ miles.

PERTH.

James Murray's Royal Asylum (for Private Patients only), Perth and Kincarratine. Scotland. Res. Phys. and Sup., Dr. Urquhart. Mode of access—By Cal., N. Brit., or Highland Rys., under 2 miles from Station.

PLYMOUTH.

Plympton House, Plympton, S. Devon. Res. Med. Sup., Charles Aldridge, M.D. Mode of access—1 mile from Plympton, on G. W. R., 2 miles from Marsh Mills, L. and S. W. R.

ROTHERAM (Yorkshire).

Grange Hall, near Rotheram, 5 miles from Sheffield (for ladies). Res. Prop. and Med. Sup., J. G. Atkinson, M.D., and C. Clapham, M.D. Mode of Access—M. S. and L. R., Grange Lane, ½ mile.

SURBITON.

Sutherland House, nr. Kingston-on-Thames (3 ladies). Res. Med. Sups., Robt. Collum, M.D., M.R.C.P. Lond., M.R.C.S. Lond., and Mrs. Collum. Mode of access—Surbiton, on L. & S. W. R., about ½ mile.

STARCROSS.

Western Counties Idiot Asylum, Starcross, Exeter. Res. Sup., William Lock. Mode of access—South Devon line, G.W.R., Starcross Station, 8 miles below Exeter, 5 minutes' walk.

SALISBURY.

Fisherton House Asylum. Med. Sup., William Corbin Finch, M.D. Mode of access—L. & S. W. R. from London, G. W. R. from Bristol, 5 minutes' walk.

TAMWORTH (Staffs.).

The Moat House, (for ladies). Res. Prop., J. F. Woody, M.R.C.S.

THORPE.

Norfolk County Asylum, near Norwich. Res. Med. Sup., David G. Thomson, M.D. Mode of access—Norwich (Thorpe) Station, 2 miles.

WELLS.

Somerset and Bath Asylum, Wells, Somerset. Res. Med. Sup., A. Law Wade, B.A., M.D., T.C.D. Mode of access—Wells, G.W.R. or S.D.R., 2 miles, Masbury, S.D.J.R., 2½ miles.

WHITCHURCH (Salop).

St. Mary's House. Med. Sup., S. T. Gwynn, M.D. Mode of access—Whitchurch, Shrewsbury and Crewe Railway, 1½ mile.

WINCHELSEA (Sussex).

Periteau House, near Hastings. Prop. and Med. Sup., R. V. Skinner, M.R.C.S. Mode of access—S.E.R. to Winchelsea Station.

YORK.

Grove House, Acomb, 2 miles from York (for 30 ladies). Proprietress, Miss Cooney; Medical Attendant, Dr. Nelson. Mode of access—North Eastern, Midland, and Great Northern Railways, York, 2 miles, thence by cab. *See page* 589.

Lawrence House (for 8 males and 14 females). Prop. and Med. Sup., G. I. Swanson, M.D. Also *Osbaldwick Hall.* Mode of access—2 miles from York.

Lime Tree House (6 males and 4 females). Res. Med. Sup., W. J. Nelson. Mode of access—North-Eastern, Midland, and Great Northern Railways, York, 2 miles, by cab.

North Riding of Yorkshire Asylum. Res. Med. Sup., J. Tregelles Hingston. Mode of access—York Station, N.E.R.

York Lunatic Asylum, Bootham, York. Res. Med. Sup., C. K. Hitchcock, M.D. *See page* 591.

Homes for Inebriates.

Formalities necessary before the reception of a patient under the Habitual Drunkard's Act of 1879.

The patient must sign the "Form of application for admission," expressing the wish to enter the retreat, before two magistrates, who must be present at the time, and themselves sign the form on the same occasion. This matter can be completed at the private residence of the patient, or on arrival at the retreat. It is also necessary that two friends of the patient should sign, before a magistrate or commissioner, a statutory declaration that they consider the patient an "Habitual Drunkard," within the meaning of the Act of 1879.

BRISTOL.

Kingswood Park (for 20 male patients). Med. Sup., H. Grace, L.R.C.P., Cons. Phys., Owen Pritchard, M.D. Mode of access—Mid. and G.W.R., *via* Mangotsfield or Bristol, direct by carriage.

DUNVEGAN (Isle of Skye).

Orbost House (with 6000 acres of Shooting, situated on the sea coast, retired from all public thoroughfare.) Res. Prop., Dr. Maclean. Est. 1854.

LONDON.

Medical Homes Association and Temperance Agency, 5, Bloomsbury Square, W.C. Med. Sup., C. Holthouse, F.R.C.S.

RICKMANSWORTH (Herts).

Dalrymple Home for Inebriates (for 20 male patients). Med. Supt., R. Welsh Branthwaite, L.R.C.P. Lond. Mode of access—by L. and N.W.R. to Rickmansworth, thence cab 1 mile.

WALSALL.

Old Park Hall Retreat. Walsall 1 mile, Birmingham 6 miles. Res. Med. Sup., Fredk. John Gray. Mode of access—Mid. and L.N.W.R., Walsall 1¾ mile.

Hydropathic Establishments of Great Britain.

We wish to make this list complete, but it is impossible when some Proprietors do not return our letter of enquiry which is *stamped for reply.* This will account for some omissions in the present edition.

ABERDEEN.

Deeside Hydropathic Establishment, Heathcot, near Aberdeen.—Res. Med. Sup., Alexander Stewart, M.D., LL.D., F.A.S. Access—rail to Aberdeen, thence by cab or omnibus. Hydropathic conveyance meets any train when sent for, distance 5 miles. *See page* 594.

BASLOW (near Chesterfield).

Baslow Hydropathic Establishment, near Chatsworth Park, Derbyshire. Res. Med. Sup., E. M. Wrench, F.R.C.S. Access—rail to Rowley Station, to which an omnibus runs from the establishment, 5½ miles.

BATH.

West of England Hydropathic Establishment, Limpley Stoke, near Bath. Res. Med. Sup., Dr. J. P. Aston. Consulting Phys., Percy Wilde, M.D. Access—From London by G. W. R. *via* Bath or Trowbridge, or by S. W. R. *via* Salisbury; from the South West *via* Bristol, and from the North by M. R. *via* Bristol. *See page* 593.

BEN RHYDDING.

Ben Rhydding. Near Leeds, Madford, or Harrogate. Res. Med. Sup., Geo. Tennant, M.B., C.M. Access—Mid. and North Eastern, to Ben Rhydding Station, a few hundred yards.

BISHOPS-TEIGNTON.

The South Devon Health Resort, Bishops-Teignton (2½ miles from Teignmouth.) Med. Sup., R. D. Broughton, M.R.C.S. Access—Teignmouth Station. *See page* 594.

BOURNEMOUTH (Hampshire).

Bourne Hall, a residence under medical direction (not a Hydropathic or confirmed Invalid Establishment). Res. phys., Ed. P. Philpots, M.D. Access—by L. & S. W. Railway, 2 minutes from the West Railway Station.

Bournemouth Hydropathic Establishment. James Osborne, M.D., Res. Prop. Access—From London *via* Lond. and S. W. to Bournemouth. (East Station distant about 1 mile.) From the North by Mid. to West Station, distant about ¼ mile.

Branksome Hydropathic Establishment, Poole Hill. Med. Sup., A. M. Watson, M.D.

BUXTON.

The Buxton Hydropathic Establishment and Winter Residence. Access—L. & N. W. Railway and Midland Railway Stations, 4 minutes' walk from the Establishment.

The Peak Hydropathic Residence. Res. Med. Sup., S. Hyde. L.R.C.P.

Corbar Hill Hydropathic Establishment (Clarendon House).

CALLANDER.

The Callander and Trossach's Hydropathic Co., Limited, Callander. Sup., Miss Thompson. Access—Caledonian Rlwy., Callander Station, 1 mile from Station. *See page* 596.

COLWYN BAY (North Wales).

Colwyn Bay Hydropathic and Winter Residence. Med. Sup., Dr. Fred. T. Tagge, L.R.C.P., M.R.C.S. Access—L. & N. W. main line between Holyhead and Chester, Colwyn Bay Station. The Hydro. is in the best part of Colwyn Bay, 7 minutes' walk from the Station.

CRIEFF.

Strathearn House, Crieff (17 miles from Perth). Res. Med. Sup., Thos. H. Meikle, M.D., J.P. Access—Caledonian Railways (two lines); Crieff Station 1 mile distant.

DUNBLANE.

Dunblane Hydropathic, Stirling. Vis. Med. Sup., Dr. Thos. Brown. Access—Caledonian Rlwy., main line from London to Aberdeen *via* Perth; Dunblane Station, 1 mile distant.

FOLKESTONE.

Folkestone Bathing Establishment Co., Limited, Folkestone. Access—Shorncliff, Radnor Park, and Junction Stations, S. E. R.

FORRES.

Cluny Hill Hydropathic. Res. Man. Dir., W. Raff; Vis. Phys., Dr. Leslie H. Milne. Access—Forres Station, 1 mile, on Highway Ry. Inverness 24 miles.

HARROGATE (Yorkshire).

The Imperial Sanatorium and Electropathic Establishment, Royal Parade, Harrogate. Res. Med. Officer, J. R. Tunmer, M.R.C.S.E., etc.

Connaught Hydropathic Establishment. Prop., Geo. W. P. Crawford.

The Harrogate Hydropathic Establishment. (Near Leeds, Bradford and York.) Med. Sup., Richard S. Veale, M.D. Access—by N. E. R.

HASTINGS (St. Leonard's).

The Hastings Hydropathic Establishment. Access—S. E. & S. C. Railway. The Joint Station is about 1 mile distant.

HAZLEWOOD (near Ulverstone and Carnforth).

Hazlewood Hydropathic. Med. Sup., Dr. Anderson (late of Conishead Priory). Access—Midl., L. &. N. W. and Furness Railways.

ILKLEY (Yorkshire).

Craigland's Hydropathic. Props., Dobson Bros. Med. Sup., Hy. Dobson, M.D., C.M. Access—*Via* Leeds to Ilkley, M. & N. & E. Ry.

The Spa Hydropathic. (Near Leeds and Bradford.) Med. Sup., Thos. Johnson, M.D., M.R.C.P. Access—Mid. G. N. and N. E. Rys. Ilkley.

Ilkley Wells House Hydropathic. Med. Sup., Thos. Scott, M.D.

Rockwood House Hydropathic. Med. Sup., Thos. Johnstone, M.D.

Troutbeck Hydropathic Establishment and Sanatorium. Res. Med. Sup., Thos. Scott, M.D., M.R.C.S. E. Access—M. & N. E. to Ilkley.

KINGSTON-ON-THAMES.

Coombe House Hydropathic Establishment, Kingston Hill, S.W. Med. Sup., T. E. Foster MacGeagh, M.D., M.R.C.S. Access—10 miles from London (Waterloo Station) and 1 mile from Coombe Station, L. & S. W. Railway (main line). *See page* 596.

LLANDUDNO (North Wales).

Hydropathic and Winter Residence. Res. Med. Sup., H. Thomas, M.D., F.R.M.S. Access—L. & N. W. Ry., 5 minutes' from Llandudno.

The Sanatorium. Med. Sups., Drs. Bold Williams, Dalton, Davies and Craig. Access—L. & N. W. Railway Station, 10 minutes' walk.

MALVERN.

Dr. Rayner's Hydropathic. Res. Phys., T. Rayner, M.D. Mode of access—G. W. & Mid. Ry., Great Malvern Station, ½ a mile.

Malvernbury Hydropathic. Med. Sup., Walter Johnson, M.B.

MATLOCK.

Smedley's Hydropathic Establishment, Matlock Bridge. Res. Med. Supts., William B. Hunter, M.D., and Jos. G. G. Corkhill, M.B. Access—½ mile from Matlock Bridge Station on the Midland Railway; Omnibus. *See page* 596.

Jackson House, Matlock Bank, Matlock Bridge. Med. Sups., Dr. Hunter or Dr. Moxon. Access—Near Matlock Bridge Station, Midland Railway.

MELROSE.

Waverley Hydropathic. Med. Sup., Dr. Somerville. Access—N. B. R. (Waverley route). Main line Mid. R. Melrose, 1 mile.

MOFFAT.

The Moffat Hydropathic, Gallow Hill.

PEEBLES.

Peebles Hydropathic, Edinburgh, 26 miles. Med. Sups., Drs. Connel and Fergusson. Access—Caledonian and N. B. Rys. 1 Mile from stations.

PITLOCHRY.

Athole Hydropathic. Prop., W. Macdonald.

ROTHESAY (Bute.)

Glenburn Hydropathic. Res. Prop., Dr. Philps. *See page* 595.

SOUTHPORT.

Southport "Smedley" Hydropathic, Birkdale Park. Phys. F. A. Ernest Barnardo, L.K.Q.C.P.I., L.R.C.S.I., etc. Access—L. N. W. Ry. and L. & Y. Ry., Southport and Birkdale Station. Mid., Birkdale Palace. About ¼ mile from Birkdale and 1 mile from Southport.

The Limes Hydropathic (near Promenade) Southport. Res. Med. Sup., Dr. Samuel B. Fenn. Access—L. & Y., L. N. W. Cheshire lines, Midland and W. Lancashire, Chapel Street, Lord Street and Derby Road. *See page* 592.

TORQUAY.

The Torquay Hydropathic. Access—By G. W. to Torquay, 1 mile.

TUNBRIDGE WELLS.

The Spa. Med. Sup., Dr. G. L. Pardington. Access—S. E. R., and L. B. & S. C. R., distant ½ to ¾ mile.

ULVERSTON AND BARROW-IN-FURNESS.

Conishead Priory Hydropathic. Res. Med. Supt., J. Ferguson. Access—*via* Carnforth by L. & N. W. R., *via* Hellifield, by Mid. Ry.

WATFORD.

The Hall, Bushey. Res. Phys. and Med. Sup., R. J. Banning, M.D., J.P. Access—L. &. N. W. R., to Bushey Station, distant 1 mile.

WEMYSS BAY.

Wemyss Bay Hydropathic. Med. Sup., Ronald Currie, M.D., C.M. Access—Rail, Wemyss Bay, *via* Glasgow, ½ mile.

WINDERMERE.

Windermere Hydropathic, near Kendal. Res. Med. Supts., Thos. Dobson, M.D., R. Clegg, L.R.C.P. Access—L. & N. W. R., Windermere 1 mile. Furness (Bowness Landing Steps) ¼ mile.

Medical Annual Official and Trade Directory.

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Indian Army Medical Department.—India Office, London.

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Lord Chancellor's Visitors in Lunacy.—Royal Courts of Justice, Strand, W.C.

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LONDON.—Charles Hawkins, 9, Duke Street, Portland Place, W.

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IRELAND.—Daniel F. Brady, M.D., La Choza, Rathgar Co., Dublin.

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NEWCASTLE-ON-TYNE.—John Hawthorn, M.R.C.S.* 68, New Bridge St.

EDINBURGH.—William Husband, M.D.* 28, Clarence Street.
J. B. Buist, M.D., 1, Clifton Terrace.

SHEFFIELD.—William Skinner, M.R.C.S.* 250, Brook Hill.

GLASGOW.—Hugh Thomson, M.D.* 6, Lansdown Terrace.
D. C. McVail, M.B., 3, St. James's Terrace, Hillhead.

DUBLIN.—A. N. Montgomery, M.K.Q.C.P.I., 45, Upper Sackville Street

MEDICAL AND SCIENTIFIC SOCIETIES.

(For full particulars see "Medical Annual," 1886).

British Association for the Advancement of Science.—22, Albermarle Street, Piccadilly, W.

Those marked (*) may give certificates after examination of any candidate; the remainder can only certify those whom they have personally instructed.

British Gynæcological Society.—11, Chandos Street, Cavendish Square, W.
British Medical Association.—161A, Strand, W.C.
British Medical Benevolent Fund.—Sec., G. P. Field, 13, Wimpole Street
Chemical Society.—Burlington House, Piccadilly, W.
Clinical Society of London.—53, Berners Street, W.
Epidemiological Society.—11, Chandos Street, Cavendish Square, W. Secretary, 41, Queen Anne Street, W.
Geological Society of London.—Burlington House, Piccadilly, W.
Harveian Society.—Stafford Rooms, Tichborne Street, W.
Hunterian Society.—London Institution.—Finsbury Circus, E.C. Secretary, 15, Finsbury Square, E.C.
Linnean Society.—Burlington House, Piccadilly, W.
Medical Alliance Association.—Secretary, 4, Portland Place, Peckham Road, S.E.
Medical Defence Association.—Secretary, 7, King William Street, E.C.
Medical Defence Union.—17, Bedford Row, London, W.C.
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Medico Psychological Association.—Secretary, Hanwell Asylum, W.
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Ophthalmological Society of the United Kingdom.—11, Chandos Street, Cavendish Square, W.
Parkes Museum.—74A, Margaret Street, Cavendish Square, W.
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Poor Law Medical Officers' Association.—Secretary, 3, Bolt Court, Fleet Street, E.C.
Royal Astronomical Society.—Burlington House, W.
Royal Institution.—21, Albemarle Street.
Royal Medical Benevolent College (Epsom). Secretary, 37, Soho Square, Piccadilly, W.
Royal Medical and Chirurgical Society —53, Berners Street, W.
Royal Meteorological Society.—30, Great George Street, S.W.
Royal Microscopical Society.—Kings College, Strand, W.C.
Royal Society.—Burlington House, Piccadilly, W.
Sanitary Institute of Great Britain.—74A, Margaret St. Regent St. W.
Society for Medical Men qualified in Sanitary Science.—Secretary (J. E. Cooney) 20, Vereker Road, West Kensington, S.W.
Society of Medical Officers of Health.—Scottish Corporation Hall, Crane Court, E.C.
Society for the Relief of Widows and Orphans of Medical Men.—53, Berners Street, W.
Therapeutical Society of Great Britain.—64, Longridge Road, South Kensington, W.
West London Medico-Chirurgical Society.—West London Hospital, Hammersmith, W.
Zoological Society.—3, Hanover Square, W.

Agent (Advertising).

Bella, Edward, 58, Charing Cross Road, (Oxford Street end)

Agents (Medical).

Alliance Medical Agency, 9, St. James's Row, Sheffield
Blake & Co. 3, Upper Fountain St., Leeds
Hanbury & Philpot, 19, Southampton Row, W.C.
Hornibrook W., 17, Bloomsbury St., W.C.
Langley, Baxter J., 50, Lincoln's Inn Fields, W.C.
Lara, Benj. W. & Co. 3, Serle Street, W.C.
Lee & Martin, Lincoln's Inn, Corporation Street, Birmingham
Logan, James, 198, St. Vincent St., Glasgow
Needes, J. C., 1, Adam Street, Adelphi, W.C.
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Wright, Layman & Umney, Southwark, S.E.
Wyman & Westwood, 25, Charles Street, Farringdon Road, E.C.

Nursing Institutions.
London.

Deaconesses Institution, Tottenham, N.
East London Nursing Society, 49, Philpot Street, Commercial Road, East
General Lying-in Hospital, supplies Monthly and Wet Nurses, York Road, Lambeth
General Nursing Institute, 4 and 5, Henrietta Street, Covent Garden, W.C.

Guy's Hospital Trained Nurses Institution, 12, St. Thomas Street, Borough, S.E.

Hamilton Association for Trained Male Nurses, 3, Chapel Place North, South Audley Street, W.

Highbury Association of Nurses, 252, St. Paul's Road, Islington, N.

Institution for Nurses for Nervous and Mental Disorders, 1, Northop Street, Grosvenor Square, W.

Kensington District Nursing Association, 1, Bedford Gardens, W.

London Association of Nurses, 123, New Bond St., W.—Branch Offices, 86, Kennington Park Road, S.E.

London, Clapham and Brixton Association of Trained Nurses, 210, Clapham Road, S.W.

London Hospital Private Nursing Institution, Whitechapel Road, E.

Metropolitan and National Nursing Association, 23, Bloomsbury Square, W.C.

Middlesex Hospital Institute, 17, Cleveland Street, W.

Mildmay Nursing House, 8 and 9 Newington Green, N.

North London Nursing Association for the Poor, 413, Holloway Road, N.

Nursing Sisters' Institution, 4, Devonshire Square, Bishopsgate

Nursing Sisters of the Poor, 14, Wellington Road, E.

Paddington & Marylebone District Nursing Association for the Poor, 510, Edgware Road, W.

St. Bartholomew's Hospital Nurses Institute, 13, West Smithfield, E.C.

St. Helena Home, 1, Grove End Road, St. John's Wood, N.W.

St. John Ambulance Association, St. John's Gate, Clerkenwell

St. John the Divine Nursing Sisterhood, 68, Drayton Gardens, S.W.

St. John's House and Sisterhood, 7 and 8, Norfolk Street, Strand, W.C.

St. Mary Magdalene's Institution for Trained Nurses, 3, Delamere Crescent, Paddington, W.

St. Thomas's Hospital, Nightingale Fund

Westminster Training School, 27, Queen Anne's Gate, S.W.

Wigmore Institution, 32, Wigmore Street, Cavendish Square, W.

PROVINCIAL.

Bath.

Nurses' Institute, River Street

Bournemouth.

Nurses' Institute

Bradford.

Nurses' Institution, Manningham Lane

Brighton.

Rawlinson Institution, 113, King's Road

Nurses' Association, 71, Middle St.

Bristol.

Nurses' Training Institution Clifton

Cambridge.

Nursing Association, 13, Fitzwilliam Street

Cardiff.

Glamorganshire and Monmouthshire Trained Nurses' Institution.

Dover.

Trained Nurses' Institute

Glasgow.

Public Dispensary, 54, Dundas St.

Glasgow Maternity Hospital, North Portland Street

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American Journal of Science and Arts—Monthly 2/6—Trübner and Co., 57 and 59, Ludgate Hill, E.C.

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Anatomy and Physiology, Journal of —Quarterly 6/—Williams & Norgate, Covent Garden

Annals of Surgery—Monthly 2/— Baillière & Co., 20, King William Street, W.C.

Anthropological Journal—Quarterly 5/—Trübner & Co., 57 and 59, Ludgate Hill, E.C.

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Birmingham Medical Review — Monthly 1/—Cornish Bros., New Street, Birmingham

Botanical Magazine—Monthly 3/6—Reeve & Co., 5, Henrietta Street, Covent Garden

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Brain—Quarterly 3/6—Macmillan & Co., Bedford Street, W.C.

Braithwaite's Retrospect — Half-Yearly 6/6—Simpkin & Co., Stationers' Hall Court

British and Colonial Druggist—Monthly 3d—21, New Bridge St.

British Gynæcological Journal — Quarterly 1/6—Smith, Elder & Co., 15, Waterloo Place, S.W.

British Journal of Dental Science—1st and 15th 6d—J. P. Segg & Co., Regent Street

British Medical Journal—Weekly 6d —429, Strand, W.C.

Bristol Medical Chirurgical Journal—Quarterly 1/6—J. & A. Churchill, 11, New Burlington Street

Chemical Industry—Journal of Society of—Annually 30/—Emmott & Co., Manchester

Chemical News—Weekly 4d—Boy Court, Ludgate Hill, E.C.

Chemical Review—Monthly, 10/- per annum—5, Furnival Street, Holborn, W.C.

Chemical Society, Journal of the—Monthly, 30/- per annum—J. Van Voorst, 1, Paternoster Row, E.C.

Chemist and Druggist, the—Weekly 4d—Edw. Halse, 42 Cannon St.

Chemists and Druggists, Register of —Annual 5/—17, Bloomsbury Sq.

Chemists' Journal—Weekly 1d—12, Little Tower Street, E.C.

Dental Association, British Journal of—Monthly 6d—J. & A. Churchill, New Burlington Street, W.

Dental Record — Monthly 6d — 6, Lexington Street, Golden Square

Dental Science, British Journal of—1st and 15th 6d—J. P. Segg & Co., Regent Street, W.

Dentist's Register—Annually 3/4—General Medical Council, 299, Oxford Street, W.

Dietetic Reformer—Monthly 2d—75, Princes Street, Manchester

Drugs and Medicines of North America — Quarterly, 5/- per Annum—135, Fenchurch Street, E.C.

Dublin Journal of Medical Science—Monthly 2/- — Fannin and Co.

Edinburgh Medical Journal—Monthly 2/- —Oliver & Boyd, Edinburgh

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Entomologist, Monthly Magazine—Monthly 6d.—J. Van Voorst, 1, Paternoster Row

Entomologist, Newman's—Monthly 6d.—Simpkin & Co. Stationers' Hall Court

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Homœopathic Association (British) Annals of—Half-yearly 2/6—Trübner & Co. Ludgate Hill, E.C.

Homœopathic Review — Monthly 1/—E. Gould & Son, 59, Moorgate Street, E.C.

Homœopathic World—Monthly 6d—12, Warwick Lane

Hospital—Weekly 1d— Wm. Keep, 30, Sardinia Street, W.C.

Hospital Gazette, and Students' Journal—Weekly 2d — Bailliere, 20, King William Street

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Linnean Society, Transactions—Irregular. Price varies—Society's Apartments, Burlington House

Medical Annual — Annually 5/6—Wright, Bristol

Medical Chronicle—Monthly 2/—John Heywood, Manchester

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Medical Record—Weekly 6d, Subscription 30/- per annum—Trubner & Co. Ludgate Hill, E.C.

Medical Register — Annually 6/— 299, Oxford Street, W.

Medical Science, American Journal of—Quarterly 6/—Trubner & Co. 57 and 59, Ludgate Hill, E.C.

Medical Student's Register—Annually 1/—Med. Council, 299, Oxford St.

Medical Temperance Journal—Quarterly 6d—337, Strand

Mental Science, Journal of—Quarterly 3/6—J. & A. Churchill, 11, New Burlington Street

Meteorological Society, Journal of—Quarterly 2/6—E. Stanford, 55, Charing Cross

Microscopy and Natural Science, Journal of—Quarterly 1/6—Bailliere & Cox, 20, King William St.

Microscopical Science, Quarterly Journal of—Quarterly 10/—J. & A. Churchill, New Burlington St.

Microscopical Science, Studies in—84/- per annum—Baillière & Cox, 20, King William Street, W.C.

Midland Medical Miscellany — Monthly 6d—Richardson & Co. Derby

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Monthly Extract of British Journal of Dental Science—Subscribers only—322, 324, Regent Street, W.

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Naturalist's World—Monthly 2d—Swan, Sonnenschein & Co. Paternoster Square

Nature—Weekly 6d—Macmillan and Co. Bedford Street

Nervous and Mental Diseases—Quarterly, 20/- per annum—Trubner & Co. Ludgate Hill, E.C.

New Orleans Journal of Medicine—Quarterly, 30/- per annum—Trubner & Co. Ludgate Hill, E C.

New Sydenham Society—Irregular—Subscription 21/—H. K. Lewis, 136, Gower Street

New York Medical Journal—Monthly 27/6 per annum—Trubner & Co. Ludgate Hill, E.C.

Obstetrics, American Journal of—Quarterly, 30/- per annum—Trubner & Co. Ludgate Hill, E.C.

Odontological Society, Transactions of—Monthly during Sessions, 2/6—45 & 46, St. Martin's Lane, W.C.

Ophthalmic Hospital Reports—Quarterly 5/—J. & A. Churchill, New Burlington Street

Ophthalmic Review—Monthly 1/—J. & A. Churchill, New Burlington Street

Ophthalmology, Archives of—Annually 20/—Trubner & Co. 57 & 59, Ludgate Hill. E.C.

Otology, Archives of—12/- per annum—Trubner & Co. 57 & 59, Ludgate Hill, E.C.

Pharmaceutical Journal — Weekly 4d—J. & A. Churchill, 11, New Burlington Street

Pharmaceutical Society, Calender of —Annual 1/—17, Bloomsbury Sq.

Pharmacy, Monthly Magazine of—Monthly 6d—Burgoyne, Burbidges and Co. 16, Coleman Street, E.C.

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Provincial Medical Journal—Monthly 6d—10, Friar Lane, Leicester

Psychical Research, Proceedings of Society for—Occasionally—Trubner and Co. Ludgate Hill, E.C.

Quarterly Therapeutic Review—1/—Bairs Bros. & Co. 4, Jewry Street

Queckett Microscopic Club, Journal of—Monthly 1/—Williams and Norgate, Henrietta Street

Registrar General's Return of Births, Deaths, and Marriages—Weekly 1½d—Eyre & Spottiswoode, 9, East Harding Street

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Royal Microscopical Society, Journal of—Alt. months 5/—Williams & Norgate, Henrietta St. Covent Grdn

Sanitarian — Monthly—1/—Trubner & Co. 57 and 59, Ludgate Hill

Sanitary Engineering—Weekly 2d—47, Fetter Lane, E.C.

Sanitary Journal—Monthly, 6/- per annum—A. Macdougall, 81, Buchanan Street, Glasgow

Sanitary Record — Monthly 1/— Smith, Elder & Co. Waterloo Pl.

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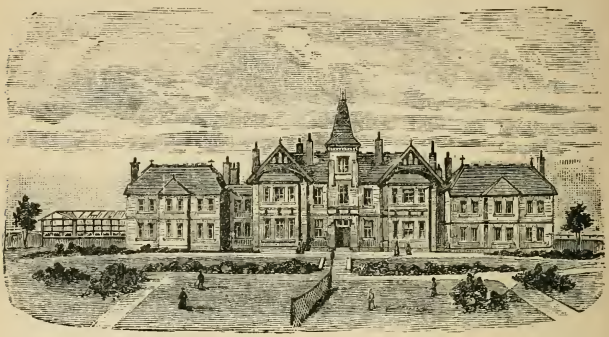

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NEWCASTLE-UPON-TYNE, *29th January*, 1885.

* Appointed at Quarter Sessions by Justices.

BAILBROOK HOUSE, BATH

For the care and treatment of Ladies and Gentlemen mentally afflicted.

ESTABLISHED 50 YEARS.

Resident Medical Proprietor, LIONEL A. WEATHERLY, M.D., M.R.C.S.

Beautiful Mansion, standing in 30 acres of well wooded Park with lovely views of Bath and surrounding scenery. Fifteen minutes' drive from G.W.R. and Midland Stations, Bath.

Horses and Carriages, Billiards, Lawn Tennis, Fishing, Boating, &c.

Great Improvements have been made during past year in house and surroundings. *Vide* Visitors' and Commissioners' Reports.

Terms inclusive from 2½ to 10 guineas per week according to circumstances of case and accommodation required.

ABINGTON ABBEY RETREAT

Near (NORTHAMPTON).

THIS Establishment, instituted some forty-one years since for the Treatment of the Mentally and Nervously Afflicted, of the Upper and Middle Classes, and one of the earliest to adopt the enlightened and humane Treatment, since accepted as the only true method of approaching these sad maladies with the hope, if not of cure, at least of alleviation; still continues its efforts in the same spirit under the general management and control of the late Dr. Prichard's brother, who, thoroughly conversant with the treatment hitherto so successfully adopted, is also assisted by the lady members of the family, and efficient Medical advice and care; the object of each being, while quietly exercising all necessary moral and physical supervision, to make the place as homelike as possible—many patients of both sexes whose condition allows of it, daily associating, and living with the family—an end scarcely attainable under the necessarily inelastic routine of large public Establishments.

The House, within twenty-five minutes' walk of the fine Market-town and its Amusements, and of three Railways communicating with all parts of the Country, is still thoroughly retired in its fine well-wooded surroundings of many acres, with Church adjoining, and with its liberal management and homelike arrangements, will be found a charming refuge for quiet chronic cases.

For Terms and other particulars, apply to MR. H. S. PRICHARD.

GROVE HOUSE, ACOMB, YORK.

For the reception of Ladies Mentally Afflicted belonging to the Upper and Middle Classes.

This old-established House has all the comforts of home, is pleasantly situated with Southern aspect on a commanding eminence, and is visited daily by a duly qualified medical man.

TERMS—FROM 16/- PER WEEK, ACCORDING TO ACCOMMODATION.

Private Sitting Room and Separate Attendant, £3. 3s. per week, including Carriage Exercise.

The comfort of the patient is secured by the personal superintendence of

MISS COONEY,

The Proprietress.

WONFORD HOUSE (HOSPITAL FOR THE INSANE),

NEAR EXETER.

A Registered Hospital for the Upper and Middle Classes.

This Institution is situated in a beautiful and healthy locality, within a short distance of the City of Exeter. There is comfortable accommodation at moderate rates, both in the Hospital itself and at Plantation House, Dawlish, a seaside residence on the South Devon Coast, affording more privacy, with the benefits of sea-air, and a mild and salubrious climate. Private Rooms and Special Attendants provided, if required.

For Terms, &c., apply to P. MAURY DEAS, M.B., M.S.Lond., Resident Medical Superintendent.

CRICHTON ROYAL INSTITUTION, DUMFRIES.

Endowed by the late JAMES CRICHTON, Esq., of Friars Carse, and incorporated by Act of Parliament, as a Hospital for the Insane and a Home for Mental and Nervous Invalids of the higher and middle classes.

The trustees and directors of the Crichton Royal Institution, in order to meet the requirements of a large section of the community, have instituted an intermediate department for the care and treatment of persons of unsound mind, at rates of board of £40 and £52 per annum. Information regarding higher class rates to be had on application.

Communications to be Addressed to DR. RUTHERFORD, *Medical Superintendent.*

COUNTY ASYLUM,

LANCASTER.

PRIVATE PATIENTS are admitted into this Institution at 14/- and 21/- per week.

ADVANTAGES: healthy elevated situation, proximity to the sea, abundant exercise and amusements, and excellent accommodation.

For further particulars, apply to

DR. CASSIDY, *Resident Medical Superintendent.*

HOLLOWAY SANATORIUM,

VIRGINIA WATER.

A Registered Hospital for the CURE and CARE of the INSANE of the UPPER and UPPER MIDDLE CLASSES only.

This Institution is situated in a beautiful and healthy locality, within easy reach of London. It is fitted with every comfort, and many of the rooms and corridors are provided with the electric light. Patients can have Private Rooms and Special Attendants, as well as the use of General Sitting Rooms, at moderate rates of payment. Boarders not under certificates can be admitted. Accommodation is provided for patients' friends who wish to reside near them, for long or short periods.—For Terms, apply to the Resident Medical Superintendent, S. REES PHILLIPS, M.D., St. Ann's Heath, Virginia Water, Egham, who will be glad to show the establishment at any time.

BEDFORD.—BISHOPSTONE HOUSE,

Situated in the outskirts of the town, is licensed for the reception of ten ladies, and has all the appointments of a superior home. It is adapted for the care and treatment of every phase of mental unsoundness. The staff of attendants is sufficiently numerous to permit of the entire absence of Seclusion and Mechanical Restraint: there are no locked doors. On account of the limited number of patients, an amount of individual attention can be given to each, which is impossible in large asylums. By this means rapid recovery is promoted, and tendency to lapse into dementia is prevented. A weekly Service is held in the House for those unable to go to Church, and a religious influence throughout the establishment is encouraged.

Private Carriages are kept for the use of the patients, and suitable occupation and amusements are provided.

Dr. and Mrs. SIMPSON CRAIG, *Resident Proprietors.*

Midland Railway—One Hour from St. Pancras.

ISLEWORTH (MIDDLESEX).

WYKE HOUSE, NEAR BRENTFORD.

Wyke House is beautifully situated in its own grounds of 30 acres, and is within one mile of the Great Western Railway, South Western, and District and Metropolitan Railways.

It is for Ladies and Gentlemen mentally afflicted, of the upper and middle classes. For terms, apply to

C. H. KEEP, M.R.C.S.,
Resident Medical Superintendent.

YORK LUNATIC ASYLUM.

The Governors of this Institution, which is capable of accommodating about 200 Patients, having expended a large sum of money in extensive alterations and improvements, which include the erection of billiard room, American bowling-alley, recreation and dining hall, in addition to spacious and well-ventilated sitting and bed-rooms for first-class patients, lofty corridors for in-door exercise, and numerous and healthy sitting and bedrooms for associated patients, now offer superior accommodation for the reception of lady and gentlemen patients. The Asylum is efficiently heated by steam, has ample recreation grounds, gardens, etc., and is pleasantly situated in the suburbs of the City of York. In addition to the resident Medical Superintendent a Consulting Physician regularly visits the patients.

TERMS, including carriage exercise, from Two Guineas per week.

There are vacancies for patients at a lower scale according to circumstances. Information as to terms, etc., may be obtained on application to

DR. HITCHCOCK, *Resident Medical Superintendent.*

HARPENDEN HALL,

HERTS.

A private Asylum for Ladies of the Upper and Middle Classes. This Establishment is well adapted for the classification of cases. The rooms are large and cheerful. Private Suites of Apartments and separate attendance can be given if desired. It is delightfully situated in one of the most beautiful parts of the country. There is a large Common extending to the gates. Carriage exercise, lawn tennis, and every amusement is provided, the object of the Proprietor being to make the place as home-like and as free from the appearance of restraint as possible. It is four miles from St. Albans and twenty-five from London, on the Midland Railway.

TERMS—from Two Guineas a Week.

Apply to **A. MacLEAN,** *Proprietor and Medical Superintendent.*

NORTHWOODS HOUSE,

WINTERBOURNE, near Bristol.

PRIVATE ASYLUM FOR LADIES AND GENTLEMEN

Situated in a large park in a healthy and picturesque locality, easily accessible by cab from Bristol or from Fishponds, Yate or Patchway Stations.

The building is FIREPROOF.—For Further information, see London Medical Directory, pp. 1659, and for terms, &c., apply to Dr. EAGER, Resident Physician.

SOUTHPORT.

THE LIMES HYDROPATHIC ESTABLISHMENT,

NEAR THE PROMENADE.

Terms Moderate. **Hydropathy in its every improved application.**

PROPRIETOR AND HYDROPATHIST, SAMUEL KENWORTHY.
RESIDENT CONSULTING PHYSICIAN, DR. SAMUEL B. FENN.

Separate Suite of enlarged and new Hydropathic Baths, and also of Turkish Baths, both for Ladies and Gentlemen.

Good Train Service. Prospectus and a copy of "Healthy Life" (a Monthly Hydropathic Journal) sent free.

Telegraphic Address: "KENWORTHY, SOUTHPORT."

TELEGRAPHIC ADDRESS:
"SCARLATINA, LONDON."

References permitted to leading Physicians.

PRIVATE FEVER APARTMENTS.

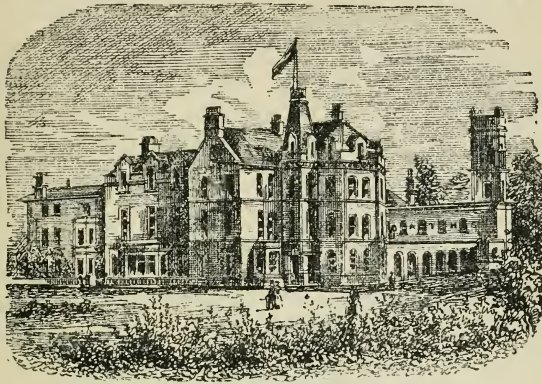
Messrs. A. and B. SCARLETT, Hygienists and Agents for Fever Apartments, beg leave to inform the members of the Medical Profession that the following Departments are now included in the work of this Agency:—

APARTMENTS for ALL DISEASES, medically certified and situated in good localities, West End and Suburbs; a Private High-class HOME for SCARLET FEVER Patients, remaining under the care of their own Physicians; APARTMENTS for MEASLES (Special); ISOLATION for SUSPICIOUS CASES for a few days pending accurate DIAGNOSIS; CONVALESCENT ACCOMMODATION for infectious cases, Suburbs, Country, or Sea-side; SANITARY DISINFECTION by a Professional Disinfector; and REMOVAL of PATIENTS at any hour, without publicity, on receipt of telegram.

POSTAL ADDRESS AND OFFICE FOR ENQUIRY, **50, Wilton Road, S.W.**
Near Victoria Station.

A detailed Prospectus sent on Application.

THE WEST OF ENGLAND
HYDROPATHIC ESTABLISHMENT



Postal Address: Limpley-Stoke, Near Bath.

Telegraphic Address: "HYDRO," Limpley-Stoke.

AND WINTER RESIDENCE.

Resident Medical Superintendent—

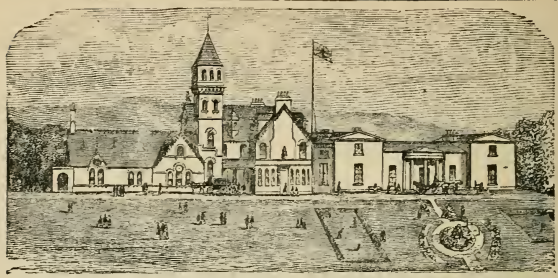
J. PITNEY ASTON, Esq.,

Member of the British Medical Association; Medical Officer of Health, Ecclesshill, Yorks. (1871-1883); Member of the Bradford Medical Commission on Woolsorter's Disease; formerly Private Assist. to T. Pridgin Teale, Esq., F.R.C.S., Consulting Surgeon Leeds General Infirmary, Author of "Dangers to Health."

This Hydro. is one of the oldest, most comfortable and thoroughly equipped in the kingdom. The public rooms are numerous, large and lofty; the corridors artificially warmed, and the grounds which are fourteen acres in extent, most tastefully laid out. The Bath rooms are large, complete, and in separate departments, and the treatment includes Turkish, the usual Hydropathic with special Chemical and Medicated Baths, Electricity (for which a special room is fitted up), Massage and Medicine as required. The Establishment is only three minutes' walk from the Railway Station, and the Postal Telegraph Office adjoins the gates. Pleasant excursions to various country seats and places of interest in the neighbourhood may be made by rail or road. As a Winter Residence, it is pre-eminently adapted to Invalids.

Address—**THE MANAGER**, *as above.*

For further particulars see page 535.



DEESIDE HYDROPATHIC ESTABLISHMENT,

HEATHCOT near ABERDEEN.

THE Climate of Deeside is the most healthy and bracing in Great Britain. Residents at this Establishment have the privilege of preserved Salmon and Trout Fishing in the River Dee, free, as it runs through the Estates of Heathcot and Ardoe.

The Turkish and other Baths are constructed with all the latest improvements necessary for the practice of Hydropathy.

Terms per week, £2 10s.; for two having same bedroom, £2 5s. each. From 1st November to 30th April, £1 15s.

For particulars apply to Dr. STEWART, Medical Superintendent, Heathcot, near Aberdeen.

THE

SOUTH DEVON

HEALTH RESORT.

BISHOPS TEIGNTON.

(Teignmouth the nearest Station).

This select and comfortable Health Resort is situated in one of the healthiest and, for scenery, one of the most beautiful parts of South Devon, about 2½ miles from the coast. It is specially recommended as most suitable for delicate persons, and those needing rest and pleasant change. It has accommodation for about thirty visitors, and "has all the comfort and charm of a gentleman's country home." There is a first-class suite of Baths, which are given under medical supervision. Extensive Private Grounds. Tennis Court. Carriage and Pair. Prospectus and Testimonials sent on application.

C. B. CARPENTER, *Proprietor.*

Dietary Arrangements.—Cup of Tea or Milk on rising for those who desire it. Breakfast at 9; Luncheon, 1.30; Coffee, 2.15; Afternoon Tea at 4; Dinner, 6.30; Coffee, 7.15; Milk, Cocoa, and Biscuits at 9.15.

FARNBORO', HANTS,
HYDRO-THERAPEUTIC
ESTABLISHMENT.

On the border of Aldershot camp there has been opened an Establishment for carrying out the PINE TREATMENT in all its details, exactly as at the German Spas, where this method has been so successful. The thousands who have hitherto been obliged to resort to Reichenhall, Ischl, and other foreign places, may now undergo the Pine Treatment in a first-class establishment, within an hour of London, where it may be carried out throughout the winter; a great advantage to many sufferers from GOUT, RHEUMATISM, and other affections, in addition to the BRONCHIAL and CHEST DISEASES for which the Pine Treatment has so long been employed in Germany. The INHALATION ROOM has been built on the model of that at Reichenhall. A fine Turkish Bath has been added, and altogether the Establishment is one of the most complete in England, while its Pine Baths and its Russian Baths are unique.

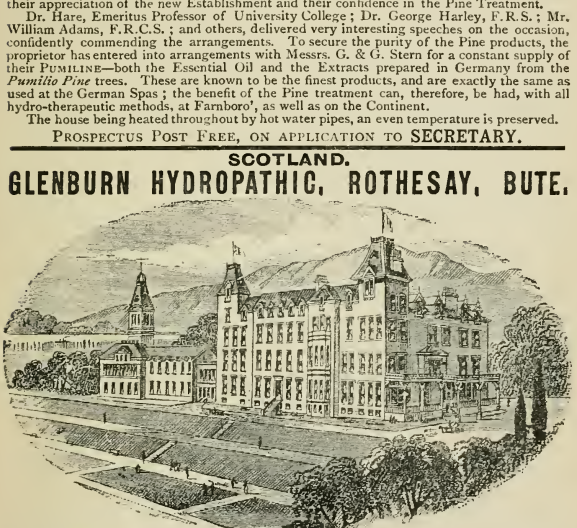
At the inaugural ceremony a number of London Physicians were present, and expressed their appreciation of the new Establishment and their confidence in the Pine Treatment.

Dr. Hare, Emeritus Professor of University College; Dr. George Harley, F.R.S.; Mr. William Adams, F.R.C.S.; and others, delivered very interesting speeches on the occasion, confidently commending the arrangements. To secure the purity of the Pine products, the proprietor has entered into arrangements with Messrs. G. & G. Stern for a constant supply of their PUMILINE—both the Essential Oil and the Extracts prepared in Germany from the *Pumilio Pine* trees. These are known to be the finest products, and are exactly the same as used at the German Spas; the benefit of the Pine treatment can, therefore, be had, with all hydro-therapeutic methods, at Farnboro', as well as on the Continent.

The house being heated throughout by hot water pipes, an even temperature is preserved.

PROSPECTUS POST FREE, ON APPLICATION TO SECRETARY.

SCOTLAND.
GLENBURN HYDROPATHIC, ROTHESAY, BUTE.



ROTHESAY, as a Health Resort, is termed the Brighton of Scotland. Glenburn is a delightful residence protected from east winds.

An additional Drawing Room with a southern aspect, overlooking the Flower Garden, with over 20 new Bedrooms, and Nursery for Children; large handsome Recreation Hall, Music and Billiard Room, Lawn and Ash Tennis Court, Bowling, Boating.

THE BATHS, Turkish, Vapour, Salt, Russian, Medicated, Electric & Swimming, finest in Britain.

Under the direction of Mr. PHILP, Proprietor of the Cockburn Hotels, Edinburgh and Glasgow. } **DR. PHILP, Resident Physician.**

SMEDLEY'S HYDROPATHIC ESTABLISHMENT,
MATLOCK BRIDGE, DERBYSHIRE.

Physicians:—WILLIAM B. HUNTER, M.D., &c.
JOS. G. G. CORKHILL, M.B., M.R.C.S.E., etc., *Resident.*

TURKISH and RUSSIAN BATHS have been built, specially adapted in ventilation and otherwise to the requirements of invalids. The General Bath Houses have been completely reconstructed, the Bedroom accommodation increased, and considerable improvements in the entrance offices and in the Public-room accommodation, the Grounds, and the general management effected.

As a WINTER RESIDENCE, this place is specially adapted for sufferers from Chest and Digestive Disorders, Rheumatism, and Gout, affording warm and well-ventilated Public-rooms, Bedrooms, Corridors, covered Balconies, permitting open-air exercise in all weathers; and a large Billiard Room, with two tables, a Smoking Room. Hydraulic Passenger Hoist to the Bedroom flights. The numbers during the Winter Months average from 100 to 150.

For full particulars see the Prospectus, to be had on application to

THE MANAGER.

KINGSTON-ON-THAMES.

COOMBE HOUSE HYDROPATHIC ESTABLISHMENT,
KINGSTON HILL, S.W.

This fine old Mansion was formerly the residence of Lord Liverpool. The situation is unequalled as a health resort; on high ground, south slope of Coombe Hill, gravel subsoil, celebrated Coombe water. Charming walks and drives in the neighbourhood, and park of fifty acres. Turkish and all Hydropathic baths.

THE CALLANDER AND TROSSACHS
HYDROPATHIC,
CALLANDER.

This Magnificent Establishment, situated in the centre of the Loch District of Scotland, has been acquired by a new Company of Proprietors, and has undergone Extensive Alterations and Improvements. It has been entirely Re-Painted and Decorated. Gas has been introduced throughout the Building, and special attention has been given to have a complete system of drainage.

Accommodation for over 100 *Visitors. Special Coach Excursions each day to different Places of Interest in the Neighbourhood.*

Table d'hôte Dinner, 6.30. 'Bus awaits all the trains.

THE

HAMMAM OR TURKISH BATH,

76, JERMYN STREET, S.W.

(FOUNDED 1862).

Total Number of Bathers to 31st Oct. 1887, 884,669.

The Bath is open daily from 7 a.m. to 9 p.m.; on Sunday from 9 a.m. to 3 p.m. (Entrance by Side Door).

TERMS OF ADMISSION.

ANNUAL TICKET - - - - - - -		£8 8s.
7 am. to 7 p.m. -	Single Ticket - - - - -	4s.
	Twelve Tickets (3/- each) - -	36s.
After 7 p.m. - -	Single Ticket - - - - -	2s.
	Twelve Tickets - - - -	£1

Members of the Medical Profession (on presenting their card) can obtain Medical Tickets at the reduced rate of 2s., or twelve tickets for £1.

NO TICKETS ISSUED AFTER 8 p.m. BATH CLOSES at 9 p.m.

CAFÉ, OR RESTAURANT.

Breakfast and Luncheons are served according to a fixed tariff. Oriental dishes are supplied. Coffee, Chocolate, Sherbet, Tobacco, and Light Wines are also sold during the hours the bath is open.

The Hair Dressing Gallery is held by PENHALIGOM & JEAVONS, the celebrated Hair Cutters and Perfumers.

Messrs. GREGORY & MACKINTOSH, Chiropodists, of 132a, Regent Street, have, for the convenience of Bathers, a private room in the Bath, where they are in attendance daily.

PUMILINE

Oleum Pini Pumilionis. Extractum Pini Pumilionis. *(Stern).*

(PURE ESSENCE and EXTRACT of PUMILIO PINE.)

STERN'S PUMILINE, the **Pure Essential Oil** and the **Pure Extract** of the **Pumilio Pines** grown on the higher altitudes of the Alps, in regions of perpetual snow, has long been used as a remedy for **Gout, Rheumatism, Throat** and **Chest Affections.**

The system of **Pine Treatment** for these ailments, in conformity with that so successfully carried out at *Homburg, Ischl, Reichenhall*, and other *Health Resorts on the Continent*, has now for the first time been introduced into this country at the Hydro-Therapeutic *Establishment at Farnborough*, Hants. Baths and Inhalation Rooms have been erected for the special treatment by Pumilio Pine of patients suffering from Gout, Rheumatism, and Throat and Chest Affections, under the guidance of a Resident Physician. **STERN'S PUMILINE** is the only Pine Essence and Extract used at the *Farnborough* Establishment.

PUMILINE is much employed in *Germany* and *Austria*, and is now freely prescribed in this country.

Report of W. J. SYKES, Esq., M.D., on Pumiline :—

"London, *October 10th*, 1887.

"I have carefully examined Messrs. G. & G. Stern's **Pumiline,** or Pumilio Pine Essence and Extract, and find them as represented to be the pure products of the 'Pumilio Pine.'

"From my general knowledge of the utility of various preparations of other species of the Pine tribe in the treatment of such diseases as **Gout, Rheumatism, Bronchitis,** etc., I can predict a large sphere of usefulness for Messrs. G. & G. Stern's preparations in this direction on account of their high quality, purity, and general excellence. Though only recently introduced into public notice in this country, their value has been long recognised on the Continent, and the fact that the use of Pumilio Pine Products forms a portion of the acknowledged treatment of such eminent physicians as Drs. Hœber, von Liebig, etc., speaks for itself.

"I have also investigated the properties of **Pumiline** as a **disinfectant** and **deodoriser.** I find it a powerful **antiseptic** very effectually arresting decomposition. When vapourised it acts as a potent **disinfectant** and **deodoriser,** quickly destroying **miasmata** and other offensive emanations. From its agreeable odour it will be found especially valuable as a disinfectant in the sick room, whilst it will be found thoroughly efficacious for any other purpose for which a powerful disinfectant may be required."

Copies of other Reports (by Prof. Attfield, Mr. Hehner, &c.), Pamphlet, and **Samples** *of Pumiline Essence, Extract, Jujubes, and a Pneumatic Spray, for deodorising, &c., sent* **free** *to Medical Men and to Chemists on application to*

G. & G. STERN, 11, Billiter Square, London, E.C.

PROPRIETOR: LEOPOLD HOFF

Always Prescribe the HAMBURG

FOR INVALIDS CONSUMPTIVES DYSPEPTICS & ALL CHEST DISEASES

THE OLD, THE GENUINE, THE ORIGINAL ARTICLE
INTRODUCED IN GREAT BRITAIN 1863

Prof. von NIEMEYER, in his lectures on Pulmonary Consumption, writes:—

"Cod Liver Oil I esteem very highly, but it can be completely replaced by the much less nauseous, and, for the stomach, less troublesome MALT EXTRACT, which instead of fat, contains fat-forming substances, in a form very easily assimilated."

"We are able to speak well of it, and the patient is sure to get a good article."—*Medical Times and Gazette.*

"It has acquired its Rights of Citizenship in the German Pharmacopœia."—*Pharmaceutische Zeitung.*

"The HAMBURG Hoff's Malt Extract Beverage of Health is aiding the digestion and of great value in WASTING DISEASES and CHRONIC DYSPEPSIA, &c."—*Liverpool Med. Chir. Journal.*

"The highest commendations may be awarded to it,"—*Medical Press and Circular.*

From the Medical Press and Circular, September 7th, 1887.

Farinaceous matters are insoluble, and only load the alimentary canal and aggravate the patients' sufferings. What then must the patient have; What fuel is it which feeds the lamp of life? Grape sugar! Soluble carbohydrates which will readily pass through the wall of the alimentary canal, and are independent of the action of the digestive ferments; these are the food of persons in Fever. Herr Hoff with his malt extract—that man has been the pioneer in this matter of soluble carbo-hydrates for delicate children, for invalids, and, as we now see, for persons acutely sick, and especially with a high temperature.

Samples may be had free of charge by applying to this address.

ALWAYS PRESCRIBE THE **HAMBURG HOFF'S.**

SPECIAL NOTICE.—At the Medical Congress in Dublin, more than 500 Physicians certified to the efficacy of HOFF'S MALT EXTRACT in the case of Chronic Dyspepsia, Consumption Anæmia, Chlorosis, etc.

M. HOFF'S London House, 29 New Bridge Street, E.C.

HOUDÉ'S PASTILS
OF
CHLORHYDRATE OF COCAINE.

Through the local insensibility they produce, our **Pastils of Chlorhydrate of Cocaine**, procure the greatest relief, and soothe the pain in **affections of the throat, hoarseness, extinction of the voice, laryngitis, inflammation of the throat, and asthmatic complaints.**

They contribute in suppressing the **pricking and titillation** of the throat, **strengthen** the vocal cords, and are also very useful in diseases of the **œsophagus** and the **stomach, sea-sickness, gastritis, gastralgia, vomiting,** etc.

DOSE.—Take 6 to 8 Pastils per diem according to age, and at least one hour before meals.

A. Houdé Manufacturer, 42, Rue du Faubourg St. Denis, Paris, and all Chemists.

SAMPLES POST FREE ON APPLICATION.

AGENTS FOR ENGLAND—

FRANCIS NEWBERY & SONS,

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PAPAÏN (FINKLER).

The new **DIGESTIVE FERMENT** combining the action of Pepsine and Pancreatine.

Manufactured by Dr. FINKLER & CO., Godramstein (Palatinate).

Sole Agent for the United Kingdom and Export—

B. KÜHN, 36, St. Mary-at-Hill, London.

USES :—

INTERNALLY: In Dyspepsia and Gastralgia. Geo. Herschel, M.D. Lond., writes in the *British Medical Journal*, April 3rd, 1886;—"I find it chiefly valuable in (1) the Chronic Stomach Catarrhs of Children, (2) Acid Dyspepsia, and (3) Severe Gastric Pain coming on shortly after eating." Recent experiments made by Prof. FINKLER, and published in THE LANCET, July 23rd, 1887, show that Papaïn digests far more energetically than best Pepsin, when the solution is concentrated *as it exists in the human stomach.*

EXTERNALLY: It has been used by *Bouchut* in *cutaneous carcinoma*, *Rossbach* for dissolving the false membranes of *Diphtheria* (see *Zeitsch. fur Klin. Med*, vi., H. 6), by *Jacobi* of New York for the same purpose, and recently Prof. Finkler himself has restored patency to an œsophagus occluded by *carcinoma* by the continuous administration of a solution.

PIL. PAPAÏN (FINKLER).

For the convenience of dispensing PAPAÏN (FINKLER) these pills are made up in bottles of 25, 50, and 100 (one and two grains each).

Can be obtained from any Wholesale Druggists in the United Kingdom.

Pamphlet on the treatment of Dyspepsia and Diphtheria by Papaïn (Finkler) *sent gratis on application to* B. KÜHN.

MADE FROM THE TUSKS of the ELEPHANT.

IVORY JELLY.

Highly Nutritious for Invalids, Consumptive People, Weakly Children, and in cases of Hæmorrhage.

No. 10280.

Messrs. R. HULBERT & Co. WESTERN COUNTIES LABORATORY,

GENTLEMEN, BRISTOL, *January 19th*, 1888.

I have completed a careful examination of a sample of IVORY JELLY, and find that it consists of a very pure form of gelatine agreeably flavoured.

The chief merit of this preparation is the extreme cleanliness of the source from which the gelatine is obtained; and no doubt this consideration will recommend it to invalids and others for whom the utmost nicety in everything connected with their diet is essential.

I am, GENTLEMEN, Yours faithfully,

F. WALLIS STODDART, *Public Analyst.*

May be had from the principal Chemists and Grocers, in Half-Pint and Pint Bottles, at 1s. and 1s. 9d. each, or direct from the Manufacturers,

R. HULBERT & CO.,

23, COBOURG ROAD, **BRISTOL.**

SPRING SALT SOAP

Is prepared from the Salt of the celebrated

SPAS AT KRANKENHEIL, BAVARIA.

No. 1.—Iodide of Sodium. No. 2.—Iodide of Sodium and Sulphur. No. 3.—Double Strength.

A most agreeable and effective disinfectant. Invaluable for the skin.

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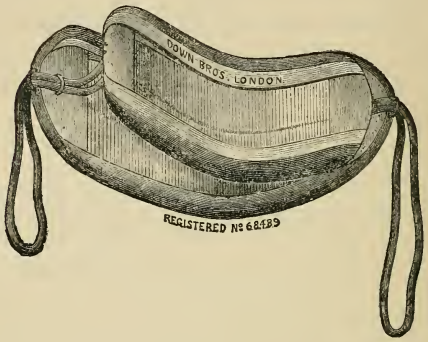

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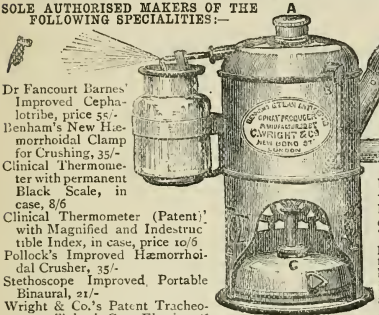

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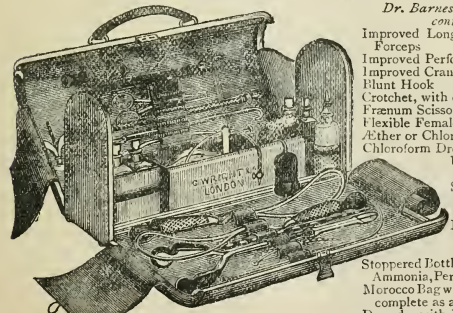

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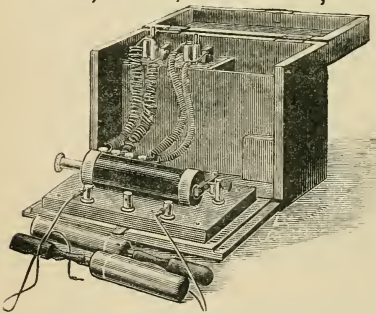

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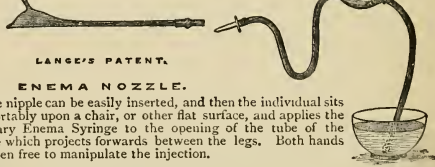

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It is astonishing the amount of money that has been paid to medical men from different parts of the country through the letters sent out from this office, without issuing legal process, some of which debts paid have been out of date, one over eleven years.

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You are not compelled to summon your patients if their accounts are placed into our hands for collection. If you desire it, we are prepared to get summonses issued in any County Court and collect the payments made by patients therein. All Court expenses are paid by this office, and deducted out of the first amount paid out of County Court; patients receiving three letters from us before being summoned.

The only information we require is the name, correct address, and occupation of each debtor with amount owing; no bill of particulars being required. In cases where the correct address is not given, a small fee is charged for finding the same, which must be sent with the debt.

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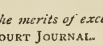

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Plate I.—A Fair Example of the Cod Liver Oil Emulsions of the Market, magnified 400 diameters.

en masse, it has been "doctored up" in divers ways. Essential oils have been added, but always increase the tendency to eructations (Williams); alkalies added, and therefore soaps

Plate II.—Emulsion of Oil and Milk, magnified 400 diameters.

formed; mucilages used like gum acacia, which is a combination of arabinic acid with calcium and sodium, and easily decomposed in a watery solution, making the oil rancid.

Plate I. represents a Cod Liver Oil emulsion made with essential oils and gums. So coarse are the subdivided globules that a segment of one of them occupies a goodly proportion of the microscopic field. What wonder that many believe it is better to give Cod Liver Oil alone than in emulsion?

Plate II. represents what is claimed to be the most finely divided of all emulsions. Not only does it go "queer," separate, etc., but the size of the large circles (the small ones are milk) conveys a good idea of how indigestible must be the oil in even the *best* of emulsions.

Plate III.—Kepler Perfect Solution of Cod Liver Oil, magnified 400 diameters.

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